

Quotation from  
Trans. of the Acad. of Science  
MANITOBA, St. Louis.  
Des Moines to Osceola, etc  
1921.



## Reporter's Note

No. \_\_\_\_\_

From \_\_\_\_\_ 19

To \_\_\_\_\_ 19





$$\begin{array}{r} 42 \\ 22 \\ \hline 126 \\ 38 \\ \hline 1008 \end{array}$$

$$\begin{array}{r} 1.26 \\ 10 \\ \hline 1.36 \end{array}$$

$$\begin{array}{r} 47 \\ 22 \\ \hline 1.71 \\ 12 \\ \hline 1528 \end{array}$$

RR. La Cite to Cedar Rapids	\$ 1.04
RR. Cedar Rapids to Mankato	1.37
Baggage, Cedar Rapids	.20
Mankato - Taxi	.25
RR. to Dubuque	1.52
RR. Dubuque to McGregor	1.73



deposited at the Brit. Museum  
at South Kensington.

Notes on the Botany of  
Manitoba

R. Miller Christy.

Jour. of Botany, vol. XXV, 1887

Pp. 271-276; 290-301.

James Britten, F. L. S.

Brit. Museum (Natural History)

South Kensington

Most of notes in July, Aug.,

Sept. & Oct., 1883.

Also in 1884.

(see descrip. of dunes, p. 272)

p. 272 - Scant covering on

dunes, - ~~has~~ fire, - hence trees

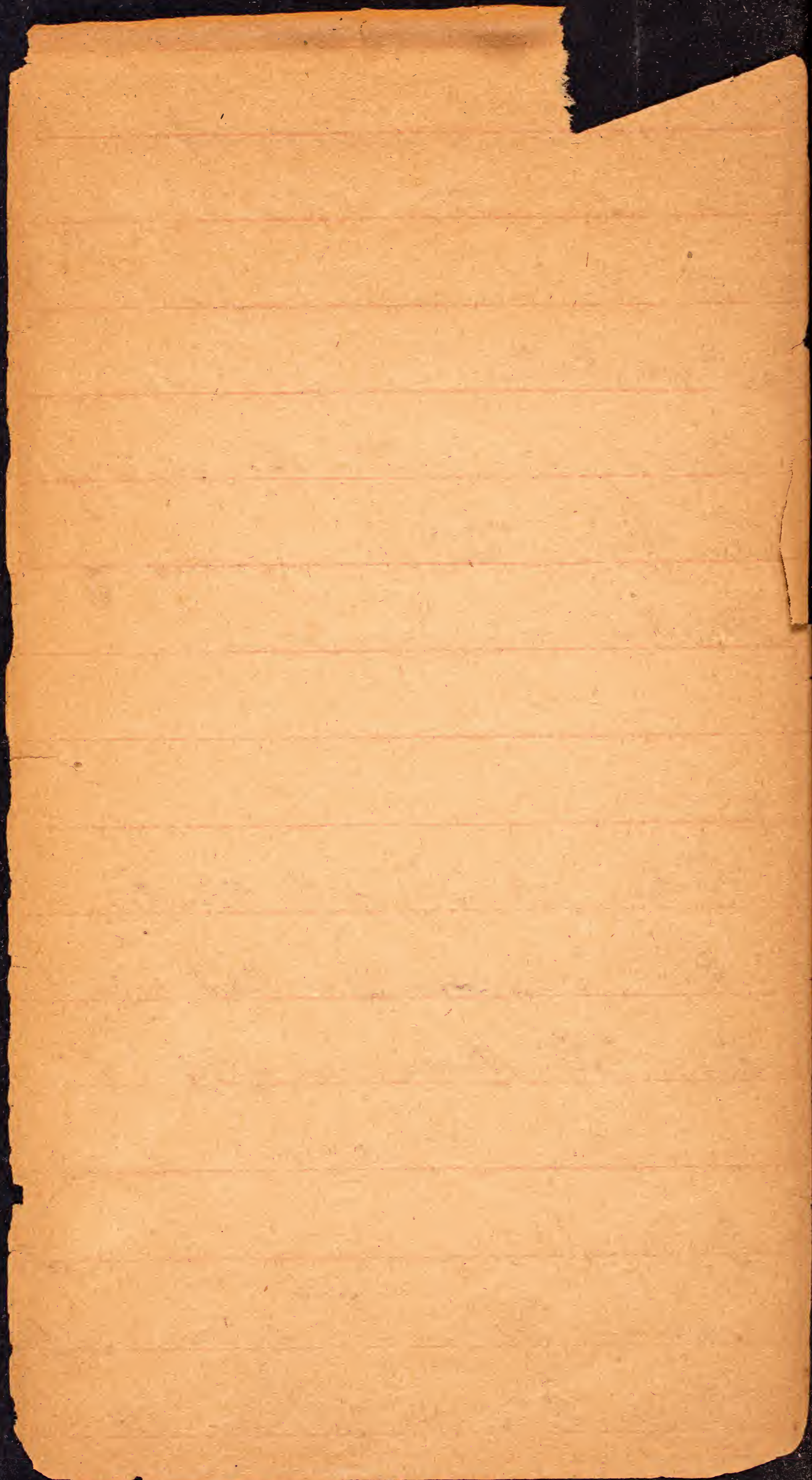
"were the grass sufficiently  
long and dense to carry fire,

the trees would be quickly  
killed and burned to logs."

p. 273 -

"If prairie fires had been  
by some means arrested fifty  
years since, Manitoba would  
today have been a densely wooded,  
instead of a prairie, country & the





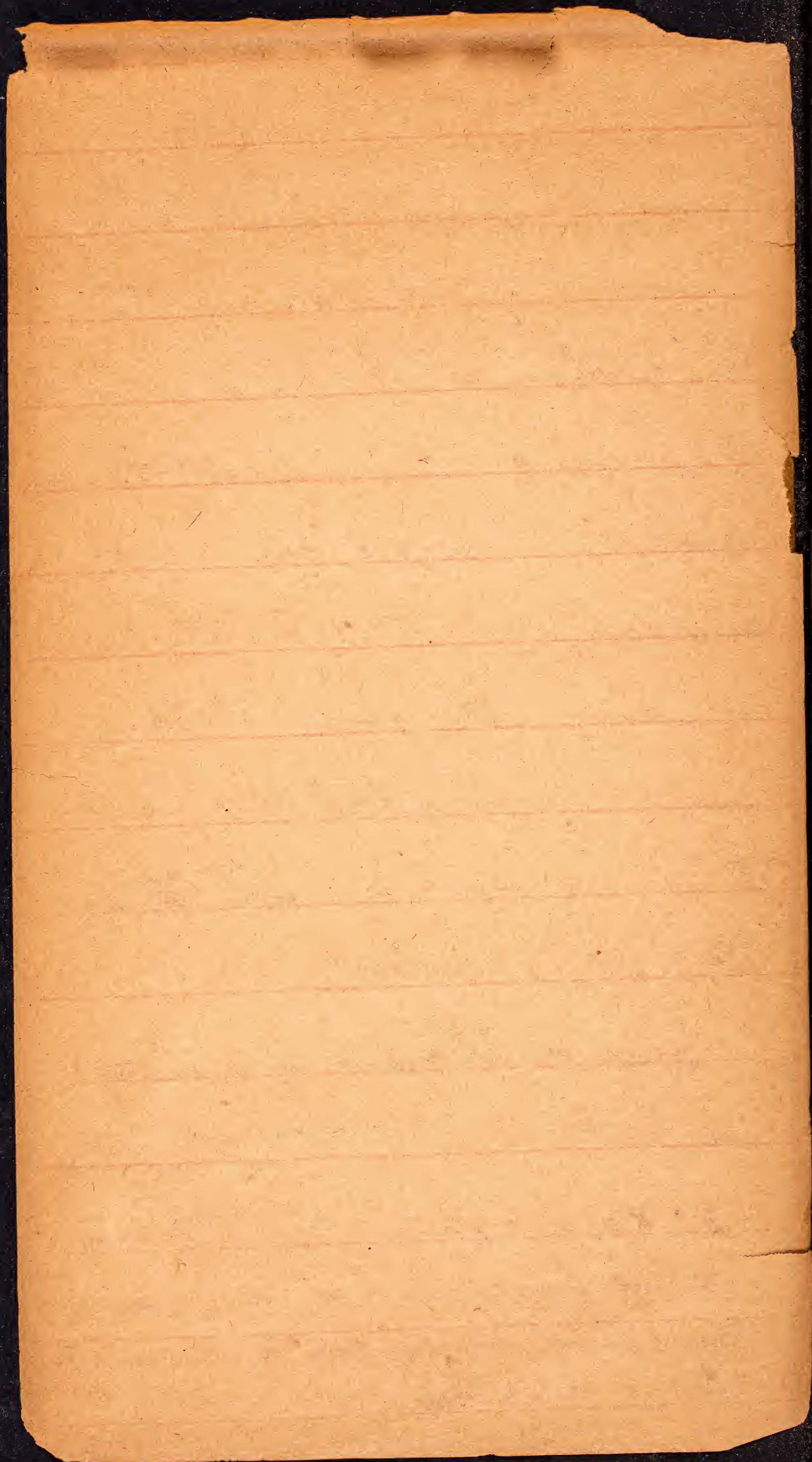


fire, too, annually destroys  
the young trees that spring  
up. In the milder parts,  
where lakes, "sloughs", and  
ponds arrest the progress of  
the fires, extensive woods of  
poplar are found,---

p. 273.

"I have elsewhere published"  
strong reasons for believing  
that the prairies of the  
Canadian North-West cannot  
be regarded as due to natural  
causes. Their treelessness and  
their black fertile soil





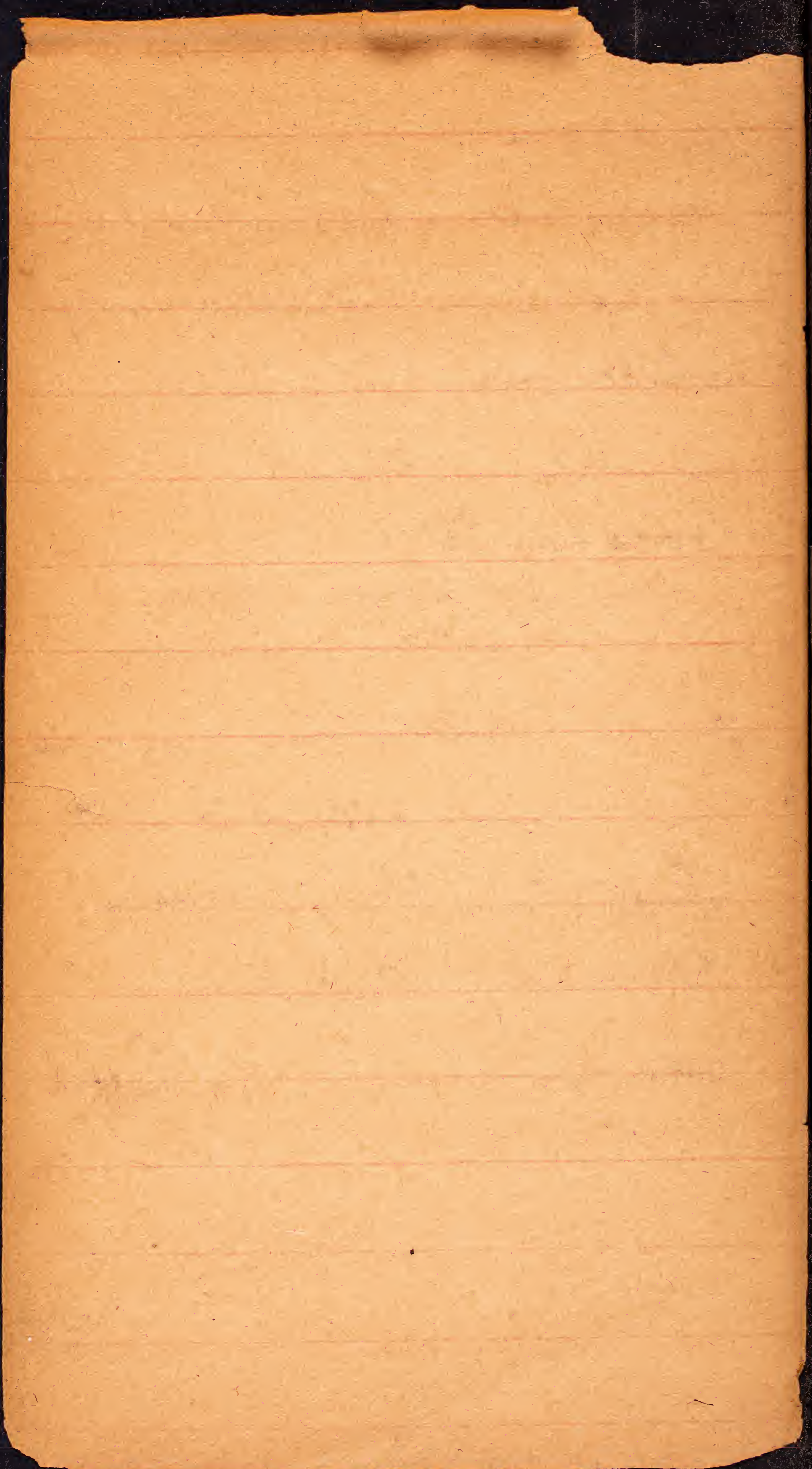


are unquestionably due  
largely (if not entirely) to  
the action of the fires, which  
for generations past have  
annually swept over vast  
areas of central North America,  
consuming the grass, killing  
and burning the trees, and  
thus everywhere extending  
the open country.

Also distribution of various  
animals ... due to action of fires

p. 274 - says few shrubs  
resist fires: *Rosa aciculata*,  
*Elaeagnus argentea* & several  
species of *Salix*







p. 275 -

"complete absence (as far  
as I observed) of abnormally  
white varieties of flowers  
usually coloured."

Only saw two:

One *Holidays odora*

" *Liatris scariosa*

p. 291 - *Astragalus caryocarpus*

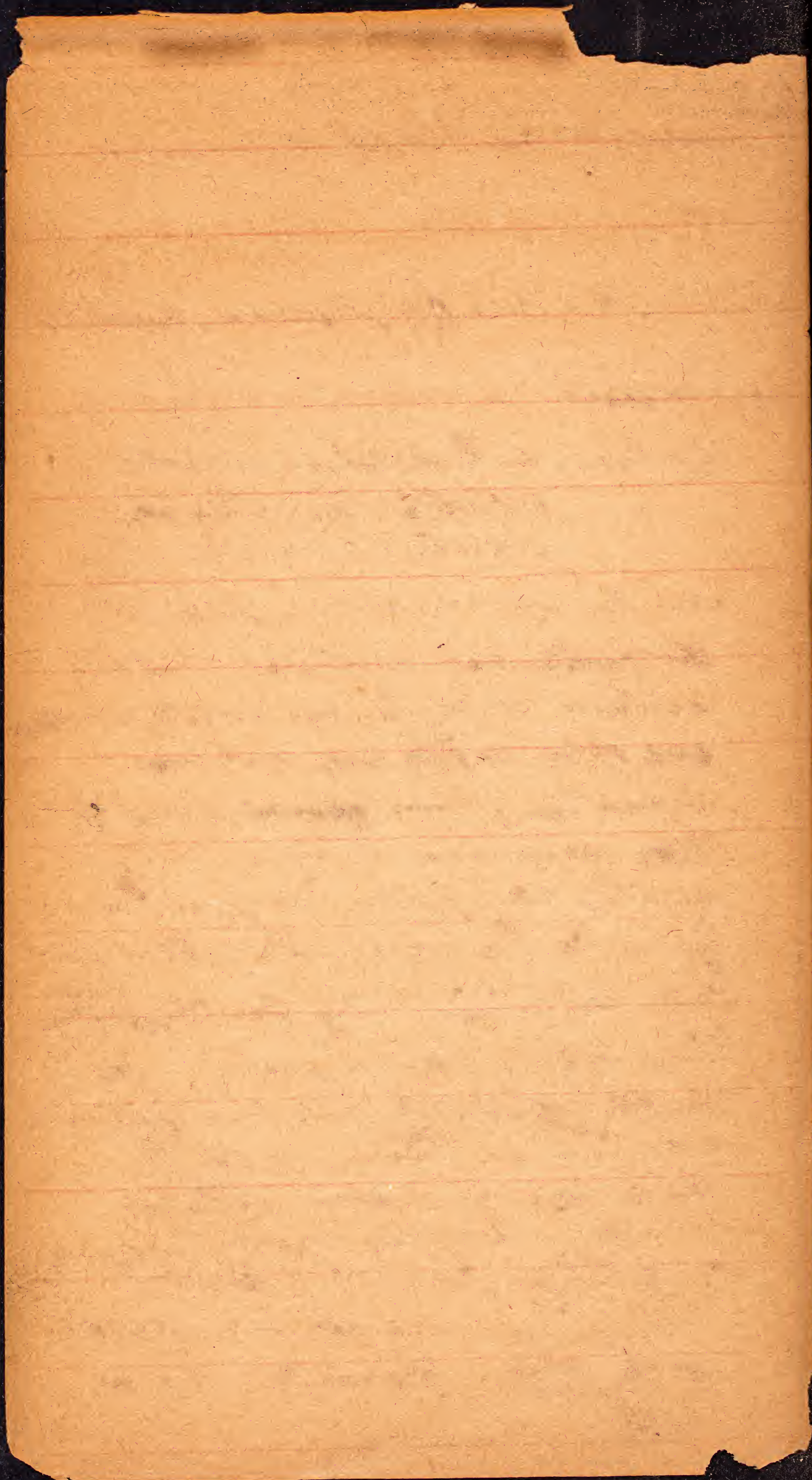
will become extinct (?) with

Buffalo. Range same.

*Glycyrrhiza lepidota*

Also range same as Buffalo







Trans. of the Acad. of Sciences  
St. Louis  
vol. I. no. 4 - 1860 -

p. 675 - Dr. Geo. Engelmann presented

a report on *Verbena* hybrids:

*Verbena urticifolia* - *stricta*

" *stricta* - *bracteosa*

" *stricta* - *hastata*

" ovula were in all instances perfectly well-developed; but the anthers were always small, incomplete and often empty and withered before the flower opened: even when they were more developed and emitted some pollen, its grains were found to be small, shrivelled, and not containing any fovilla. Between these effete pollen-grains a small number of well developed ones was <sup>p. 176</sup> sometimes seen, but these were in every instance smaller than the pollen-grains of either parent plant."

He gives measurements of pollen of hybrids & parents and also other characters.



"These observations confirm  
the position of Dr. Klotzsch  
of Berlin, that in the hybrid  
the pollen is wanting, or  
becomes empty and inefficient  
for the propagation of the species,  
and that, the ovule being  
perfect, propagation can  
only take place by fecundation  
through the pollen of either of  
the parent plants, thus  
producing forms which  
eventually will rejoin to  
the parent stock."

P. 116 A.C.

Dr. Kock reported finds  
(presumably reported) of marton  
remains of arrow-heads, etc.  
in <sup>Gasconade</sup> ~~Benton~~ Co., Mo.  
Also arrowhead with  
Marton pebbles in Benton  
Co., Mo. (P. 117)  
Also discovered by  
Mr. Holmes



p. 700. - Shows that Big  
Mound near St. Louis is  
artificial, Had been reported  
Mr. Schoolcraft, & later Dr.  
Kirk regarded it as  
natural.

on p. 61<sup>64</sup> - Dr. A. C. Kirk reports  
Mastodon Remains in the  
State of Wisconsin, together  
with evidences of the existence  
of Man contemporaneously  
with the Mastodon.

He had at one time more  
than 600 teeth of Mastodon  
from Wisconsin. Also bones,  
described in book

"Die Riesenthiere der  
Mammel, Berlin, 1845.

His article repeats part of  
book content.

This is The Gasconade Co., Mo.,  
specimen - entire.  
Also Grant Co.



Dr. A. Wislizenus  
p. 168 & 170

Was Man contemporaneous  
with the Mastodon?

This fire was built over  
burned skeleton & partly

burned the bones. (Indian  
also left implements  
fire) Then all burned.

Disagrees that contemporaneous

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Vol II - no. 1 - 1863 (pp 1-218)

Card OK.

no. 2 - 1868 pp. 459-597

p. 565-569-

Mr. Holmes remarks on the  
Loess and drift in connection  
with the Big Mound of  
St. Louis.

p. 566-

"The Loess, containing fresh-  
water and land shells, and  
several species of extinct  
mammalia, - - etc."

"The Loess being a



fresh-water deposit, (if Swallow's  
description is true) ~~would~~ it  
would require enormous  
lake. He argues against  
it.

p. 567 - Comments Deshayes  
"Origin & Formation of the  
Prairies", and thinks succession  
of shallow lakes rather than  
one big one, was situation  
... the Lacus was limited to  
the river valleys, and never  
extended to the upland prairie.  
He doubts "brown clay or  
loam" at St. Louis is Lacus.

p. 568

thinks Big "Mound" may  
be natural Lacus, but  
confirms that the form  
in it no fossils. but a  
fragment of pottery.  
(Get their paper)



Parts of Vol. I -

no. 1 - 1857 - pp. 1-92

no. 2 - 1858 - pp. 93-303

no. 3 - 1859 - pp. 305-523

no. 4 - 1860 - pp. 527-712

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Vol. III - 1878 (covers 1866-1877)

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On Climatic Change in Illinois -  
its Cause.

Amos Sawyer.

pp. 255 - 260.

p. 255 - "In the early history of  
our State, when the wild grass  
grew rank, and even little  
ponds had water - basins from  
three to five feet deep, the  
process of evaporation was  
carried on much more slowly  
than at present, and consequently  
when the heat became  
p. 256 - intense during summer



there was an immense amount  
of water vapor in the atmosphere  
ready to be condensed in  
deluging showers upon the  
slightest change in temperature.

At the present time all our  
prairie land is in cultivation  
or used as pasture. <sup>the</sup> ponds and  
small lakes have become  
so filled up that they contain  
less than half the former  
amount of water. The stock  
now consumes the reeds and  
marsh-grass, exposing the water  
to the direct rays of the sun,  
thereby promoting evaporation.  
A large amount consumed by  
stock

p. 259 "The change in the  
climate of Illinois cannot  
certainly be attributed to the  
destruction of forest trees, at  
least in the middle and  
northern part of the State, for  
they have increased since



The time when, with  
every annual burning of  
the prairie, their front  
lines were scorched and  
beaten back - the ground,  
in time becoming prairie,  
and assisting in the  
wholesale destruction of  
the life it had nourished  
its bottom. Now the  
timber is encroaching  
on the prairie, and  
to-day the area of  
woodland is greater than  
it was twenty years ago,  
for in almost every



fence-corner in the  
prairie you will find  
a vigorous young tree  
growing; the owner of the  
land have planted shade  
and fruit-trees; a beautiful  
line of dark-green marks  
the useful ~~orange~~-orange  
hedge that incloses, divides,  
and subdivides its owner's  
land; where a few years  
ago, not a tree was to be  
seen within the field  
of human vision.

He thinks removing trees  
increases flow of water from  
springs! He says:



"Inquiry and personal observation have convinced me that the removal of trees around a 'living spring' of water rather increases the flow than otherwise; in no instance has it diminished."

Cites a place on his land where everything cleared but stream persists.

Sum up: Change due to:

- 1 - Natural & artificial drainage of ponds and lakes
- 2 - Increase in domestic animals. —

About the Oaks of the  
United States.

Dr. George Engelmann.

Pp. 372 - 397

Hybrid Oaks - pp 397-400.



p. 381 Notes.

1- Quercus lyrata Walt., extends as far north as Taxodium does, to the banks of the lower Ohio in Illinois.

2. Q. macrocarpa Michx., is extremely variable in the size of its acorns, and especially in the depth and the margin of the cup, which sometimes

p. 382

covers the acorn scarcely

one-half, usually three-fourths, and occasionally entirely; the margin is

profusely or sparsely fringed.

Throughout the north-west, north of the Missouri river, a



Low scrubby form is found,  
which might be designated  
as var. depressa, as it is  
undoubtedly the obtusiloba  
B. depressa Nutt. gen. 2, 215,  
which has smaller leaves  
and much smaller acorns  
than the species, but is  
clearly a form of macrocarpa

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Quoted from Holmes, vol. II.  
p. 567-:

After referring to Les-  
quereux's idea of  
shallow lakes, etc. on  
prairie:

"Nor would this theory imply  
the existence, at any one  
time, of a vast inland  
fresh-water lake, extending  
over the whole area of the  
prairie country. Nor does  
Mr. Lesquereux suppose that this  
kind of formation is confined  
to fresh-water only, but remarks  
that it is produced in  
the same manner in the  
salt marshes of the sea



as in the fresh-water  
swamps of our lakes.

But whether these sheets of  
water were salt, brackish  
or fresh, they are quite  
distinguishable from rivers,  
or river expansions from  
which the true Loam was  
deposited; and they would  
be left covering separate  
areas, at different times,  
as the sea gradually  
retired from the land,  
until the surface drainage  
drew off the waters into  
the river valleys, forming



The river expansions  
first, and at length the  
rivers. This may explain  
how it happened that  
the Loess was limited  
to the river valleys, and  
never extended to the  
upland prairie.

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Vol. IV, 1878-86-  
pub. 1886.

Geo. Engelman, died Feb. 4, 1884

Nathaniel Holmes.

The Geol. & Geog. Distribution  
of the Human Race.  
pp. 1-35

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Engelmann, G. - The Acorns  
and their Germination  
p. 190-192



Vol. V (1886-91) 1892

Quincy, W. J. - Notes on the  
Geology of Mason County,  
Minnesota. - p. 305

p. 314 -

Glacial Deposits. -

General section (with Loom)

p. 317 -

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Robertson, Chas. - Flowers

and Insects: Umbelliferae

p. 449 -

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Vol. VI.

Chas. Robertson 1894 - 1914

Flowers & Insects. - Rosaceae

and Compositae

p. 435 - 480.

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p. 258 - Julius Hester.  
Catalogue of Reptiles  
and Batrachians Found in  
the Vicinity of St. Louis Mo.  
1893.

p. 258.

*Agkistrodon contortrix* L.  
The Copper-head.

Not uncommon in St. Louis  
Co.

"The water moccasin ---  
is found farther south  
in the State of Missouri."

Char. Robertson

Flowers & Fruits - Labiate  
p. 101-131.

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Vol. VII - no. 19 -

Julius Hester - A Contribution  
to the Herpetology of Missouri.  
1897.

p. 499 -

"Beside two Rattlesnakes and  
the Copperhead, which we



encounter all over the  
State, we find in our  
southern frontier counties  
--- *Aphisrodon piscivorus*<sup>Lacép.</sup>,  
a real poisonous snake not  
to be confounded with  
what the farmers and  
fishermen in the north  
and central part of the State  
call Water Hecacasia,  
which is the common Water snake  
(*Natrix sipedon* L.)

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Dr. C. Parker. Part 16, Vol III  
1897.

Critical Notes on the  
Mammals of

pp 371-391



Chas. Robertson - Feb & March  
vol. VII, no. 6 - 1896  
pp 157-179

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Jos Norton  
vol. VII - no 10, 1896

A Study of the Kansas  
Orstlagineae, especially  
with regard to their

germination p. 229-241

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vol. VII, no 5 - 1896  
pp 137-144

Relations of *Salix maritima*  
~~to~~ *S. cordata* Nutt. 1896  
W.M. Glatfelter.

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H. A. Wheeler  
Note on the Glacial  
Drift in St. Louis.

vol. VII, no. 3, 1895

pp. 121-122

pp. 122,

"A thin layer of gravel bearing  
loess(?) is usually found at the  
base of the true loess throughout



St. Louis County, as far as  
10 to 15 miles south of  
Pine Street and while  
most of the pebbles are  
local clasts, they occasionally  
include distant material  
like granite, etc.  
This gravel-bearing bed is  
always thin, ranging from  
 $\frac{1}{2}$  to 2 ft. in thickness and  
is similar in character  
to the transition bed  
that is found about the  
Chain of Rocks region  
between the typical  
loess and the typical



drift, or has the general  
character of the loess plain  
more or less gravel, though  
usually only a little  
gravel is present. It  
totally lacks the character  
of the true till and  
cannot be regarded  
as an ice-sheet deposit."

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R. Ellsworth Call

vol. VII. No. 1. 1895

pp 1-64-

.xx 1 plates

A Study of the Unionidae  
of Arkansas, with incidental  
reference to their dis. tribution  
in the Mississippi Valley &



Vol. VIII, 1898.

A. H. Hitchcock - p. 53-69

Geological Plant Geography

of Kansas

Vol. VIII, no. 4, 1898.

Xerophytes - p. 60-66

Lists three groups:

Class V. Rock Vegetation, p. 60

<i>Portulaca</i> <i>decolorata</i>	<i>Hedysarum</i> <i>lebellianum</i>
<i>Quercus</i> <i>alabamica</i>	<i>Lithospermum</i> <i>argenteum</i>
<i>Ceanothus</i> <i>viridis</i>	<i>Benthamia</i> <i>colona</i>
<i>Palatemon</i> <i>multiflorus</i>	<i>Encelia</i> <i>trigonata</i>
<i>Astragalus</i> <i>luteus</i>	<i>Croton</i> <i>monanthus</i>
<i>Chenopodium</i> <i>hemisphaericum</i>	<i>Fragaria</i> <i>virginiana</i>
<i>Stemodia</i> <i>virgata</i>	<i>Ceanothus</i> <i>fraxinifolius</i>
<i>Mentzelia</i> <i>oligophylla</i>	<i>Guzmania</i> <i>viridula</i>
<i>Reichardia</i> <i>peruviana</i>	<i>Portulaca</i> <i>hirsuta</i>
<i>Hemizonia</i> <i>argentea</i>	
<i>Amphispiza</i> <i>draconoides</i>	westward he
<i>Aster</i> <i>oblongifolius</i>	lists 25 sp. of
" <i>viridis</i>	plants (he does
<i>Echinops</i> <i>argenteus</i>	not use word plain)
<i>Helianthus</i> <i>argenteus</i>	among them
<i>Hymenocallis</i> <i>corymbosa</i>	<i>Yucca</i> <i>argentea</i>
<i>Senecio</i> <i>Balsamifolius</i>	<i>Platanus</i> <i>occidentalis</i>
	<i>Quercus</i> <i>viridis</i>



On hills - shrubs.

*Rhus glabra*

*Ceanothus ovatus*

*Rhus canadensis*

*Cornus asperifolia*

*Symphoricarpos vulgaris*

But there are growing in the  
woods.

P. 62

Class VI - Sand-Hill Vegetation

*Ammophila exifolia*

*Redfieldia flexuosa*

*Asclepias arenaria*

*Physalis lanceolata*  
*pruinata*

*Polemonia borealis*

*Prunella lanceolata*

*Desmodium semilifolium*

*Lithedra capitata*

*Stephanotis paniculata*

*Cassia chamaecrista*

*Liatris aquaria*

*Heterotheca lanceolata*

*Chrysopsis villosa*

*Asplenium divinal*

*Gnaphalium polycephalum*

*Helianthus petiolaris*

*Artemisia canadensis*

*Lithospermum angustifolium*

*Sporoclea leptophylla*

*Portulaca grandiflora*

*Monarda punctata*

*Amaranthus viridis*

*Froelichia floridana*

" *gracilis*

*Cyclopia platyphylla*

*Euphorbia corollata*

*Cyperus pectinatus*

" *filiculmis*

*Paspalum flexuosum*

*Cenchrus tribuloides*

*Sporobolus ciliatus*

" *crispus*

*Triodia caprea*

*Eragrostis tenuis*

" *pectinatus*

" *capillaris*

*Ammophila exifolia*



In western part of the  
State some new ones, lists  
31 species, among them:

*Salinum calycinum*  
*Gallardia pulchella*  
" *acutata*  
*Euphorbia geyeri*  
" *petaloides*  
*Stipa comata*, etc

also following extends in from prairie:  
*Ambrosia psilostachya*

also on sand hills in E. part:  
*Prunus angustifolia*  
*Amorpha canescens*

p. 63 (list on 64)

Class VII Prairie.

Western half of State in great  
plains.

On these western plains:

*Malvastrum coccineum*  
*Linum viscidum*  
*Opuntia Rafinesquei*  
" *arborescens*  
" *fragilis*  
*Atriplex spinulosa*



*Senecio Douglasii*

*Adiantum triflorum*

*Aristida purpurea*

and 22 westerly species

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The following also extend E:

*Helianthus scaberrimus*

*Trientalis juncea*

*Solidago nemoralis*

*Ambrosia psilostachya*

*Lepachys columnaris*

*Chimaphila Redowii* Oudall

*Erigeron argentatus*

*Solanum verticillatum*

*Oxybaphus angustifolius*

*Andropogon furcatus* } Predominant  
"  *scoparius* } in eastern  
*Chrysopsis nutans* } prairie

*Schizanthus luteus*

*Portulaca oligostachya*

"  *variegata*

*Trifolium dactyloides*

*Wolffia cristata*

*Eutonia obtusata*

p. 65

In addition to above in E Kansas

*Arenaria decapetala*

*Delphinium ajacis*

*Callirhoe triangulata*

"  *alcaeoidea*

*Linum sulcatum*



*Pragmites australis*  
" *lanceolata*

*Prunella angustifolia*  
" *floribunda*

" *asculenta*  
*Petalostemon violaceus*

" *candidus*  
*Astragalus caryocarpus*

" *platanus*  
*Desmodium illinoense*

*Lespedeza capitata*

*Schrankia uncinata*

*Liatris pycnostachya*

" *scariora*  
*Grindelia robusta*

*Solidago rigida*

*Helianthus laevis*

*Helianthus rigidus*

*Cnicus palustris*

*Cnicus scaberrimus*

*Asclepias tuberosa*

*Xanthoxylum cuneifolium*

*Bolva agrostis grandiflora*

*Panicum scoparium*

" *depauperatum*

*Stipa spartea*



In "Stouck plants" - p. 65

*Dryas carolin*

*Silene antirrhina*

*Sagina decumbens*

*Hypericum Drummondii*

*Stylidium alatum*

p. 66

*Euphorbia viscosissima*

*Dracopis teres*

*Andromeda occidentalis*

*Hedera hispida*

*Plantago psalmion* prostrata

On dry hills E. & S. E. - "scrub"

*Quercus nigra*

" *tinctoria*

" *macrocarpa*

" *prinoides*

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Vol. IX - 1900 (for 1899)

C. R. Ball - Notes on some western  
Willows - 1897 - p. 69

(Vols. IX & X have Hitchcock  
Subterranean Organ paper)



Vol. XI

F. C. Baker no. 1 - 1901

A Review of the Linnæans  
of Northern Illinois  
pp. 1 - 24

F. C. Baker no. 8 - 1901

Some interesting Urvellian  
Monstrosities p. 143-146

*Lamella alata*

" *legumina*  
*seris gibbon*

Vol. XII

K. K. Mackenzie & B. F. Prue

The Lepidoptera of America

1902 - pp. 11-19

K. K. Mackenzie & B. F. Prue

no. 7 - 1902

New plants from America

*Umbelliferus polytrichus*

*Iris foliosa*

*Portulaca rugulosa*



*Delphinium Northianum*

*Prunus ~~laevigata~~<sup>sp</sup>*

along river & bottom - Ill. &

p. 83 Iowa to Mo., Tex. & Mex.  
= *P. americana* Canad.

*Hypericum pseudomaculatum*

*Sambellani cordifolia pilosum*

*Physalis Minnomenis*

" *subglabrata*

*Solidago longipetiolata*

Mich. & Wis. Thru Iowa,

Ill., Mo., Kan. to Tex.

(similar to *S. nemoralis* - p. 87.)

p. 88. Iowa localities

Clinton, Lyon Co.

Emmet Co.

Ames

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*Senecio pseudotomentosus*

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Vol. XIII O

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Vol. XIV -

no. 2 - F. C. Baker - The Molluscan  
Fauna of the Dells of Wisconsin

p. 99 - 105 / 1904.

no. 3 - F. C. Baker - Notes on

*Planorbis truncatus* Miers

from Iowa localities 1904 - p. 107 -



Vol. XV -

no. 3. Frank Collins Baker.

The Molluscan Fauna of  
Melroser, Iowa  
1905 - pp. 249 -

p. 252:

*Campylis ventricosa*

p. 253

" *Cyrtorhinus*

" *Leptorhinus*

" *articulata*

" *condemnit*

" *fallaxima* (Sm.) H.

" *recta*

" *ulata*

p. 254 - " *gracilis*

*Olivaria elliptica*

*Plagiostoma recurva*

" *elegans*

*Tritogona tuberculata*

*obliquum* *repleta*

*Strophodonta edentata*

*Anodonta grandis*

"

" *v. gigantea* L.

"

*corbicula*

*Anodonta confragosa*

*Symphyla costata*



p. 255

*Synphyllota complanata*

*Margarita monodonta*

*Uros gelloni*

" *rasidum*

*Pleurobema acrotes*

*Umatula plicata*

" *heros*

" *lachrymum*

" *melanum*

" *vestitum*

p. 256

" *protulata*

" *trigona*

" *obliqua*

" *elena*

" *granibum*

*Vivipara intertexta*

" *subaranea*

*Campeloma in lignum*

p. 257

" *subulidum*

*Phyrea gyrina*

*Strobilops viridis*

*Prifidaria acumbens*

*Puccinea velutina*

*Polygyra clausa*

" *thyroidea*

" *multilineata*

" *profunda*

" *hirsuta*

" *monodonta* v. *paterna*

*Circinaria concava*



p. 258

+ *Pyramindula alluvata*

+ *Helicostoma lineata*

+ *Gomitoides arborea*

May 9, 1905

The small land snails

2 mi. NW. of New Smyrna  
on the Williams' land.

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Vol. XVI

no. 2 - F. C. Baker notes on a

collection of mollusks

from the vicinity of

Alpen, Michigan

1906.

pp. 1-15

no. 4. H. M. Hatfield

Preliu

List of Hyaline

Fungi collected in the

Vicinity of St. Louis, Mo.

from 1898 to 1905 - 1906

33-42



Get Clements  
Plant indicators  
the Carnegie Institute of  
Washington.

Jan. 21, 1921 Mandan &

Dubois - Very foggy.

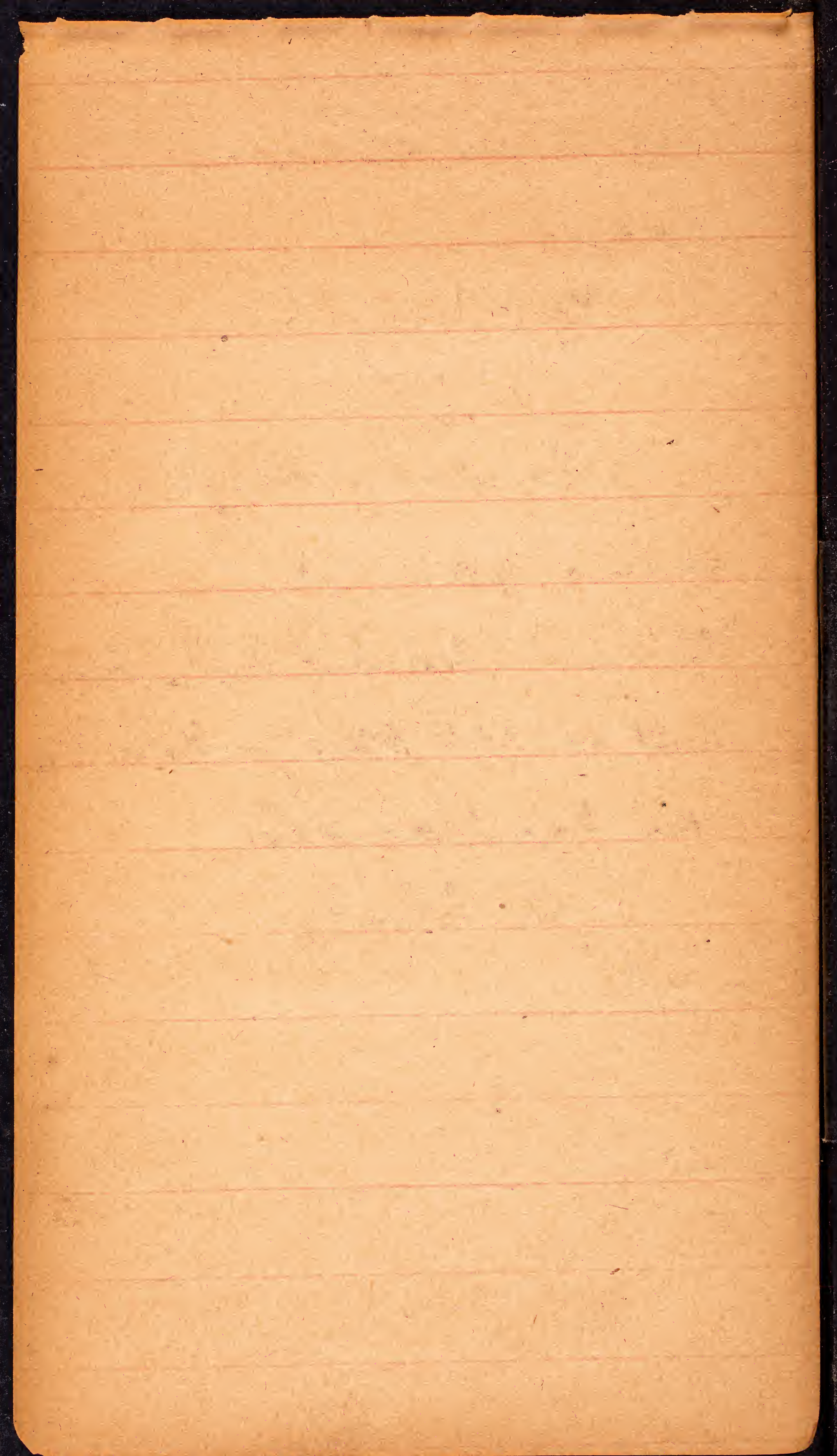
As we approach Dubois  
& Ill. C. Ry drops down  
along creek valley. There  
are many rock exposures  
with lichens & moss.

Red Cedar - Also timberline  
spruce (look good for redoubt)

White birch - common near  
along river bluffs

Dubois, Am. Elm, Red Elm  
Cottonwood.







Jan. 23 - 1921

At New Hampton

lodges were:

New Hampton

Sumner

Elma

Fredericksburg.

About 40 were present.

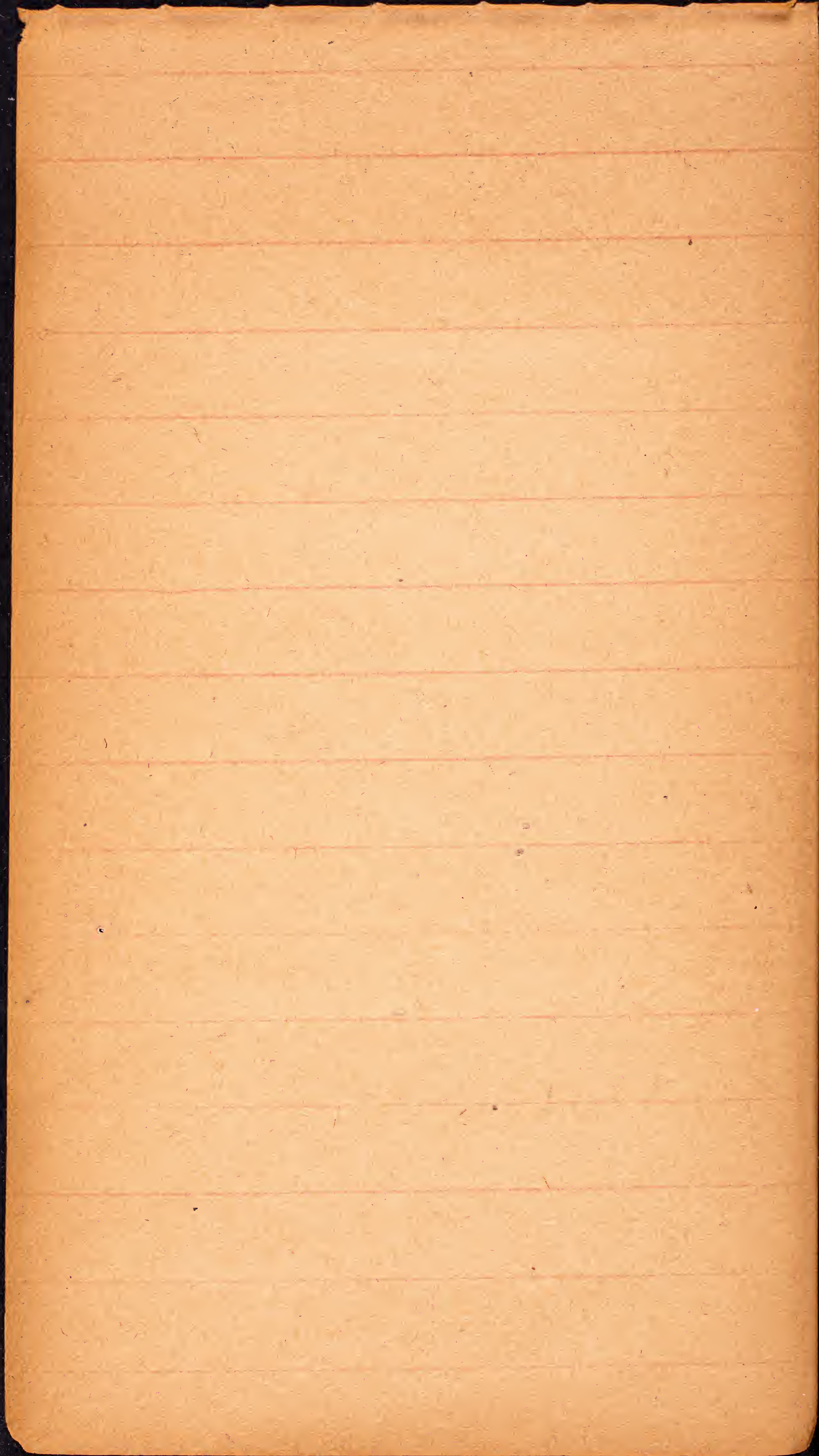
This was School of Instruction.

Left at 10<sup>10</sup> P.M. for Portville

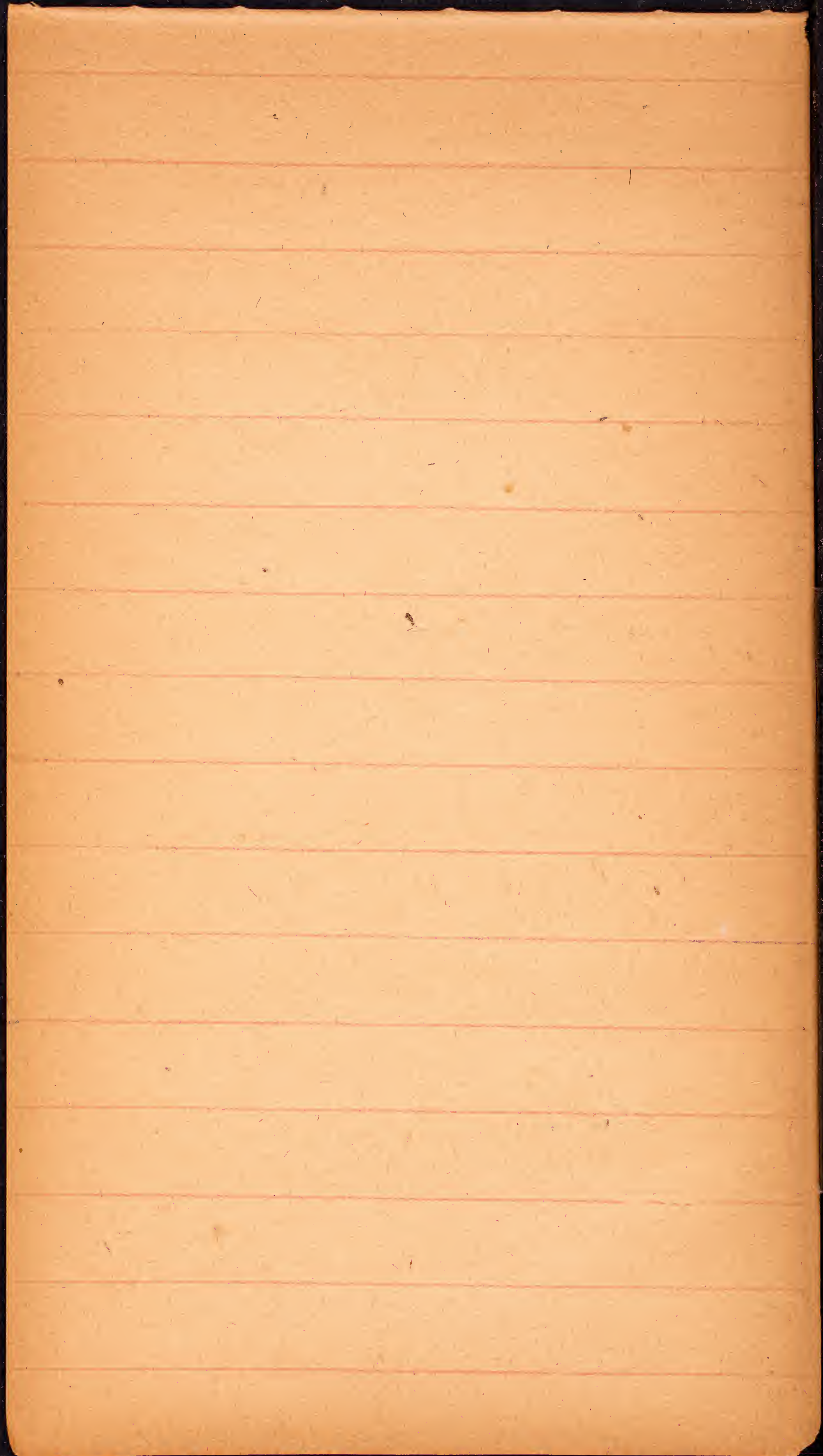
at New Hampton

L. Donky.

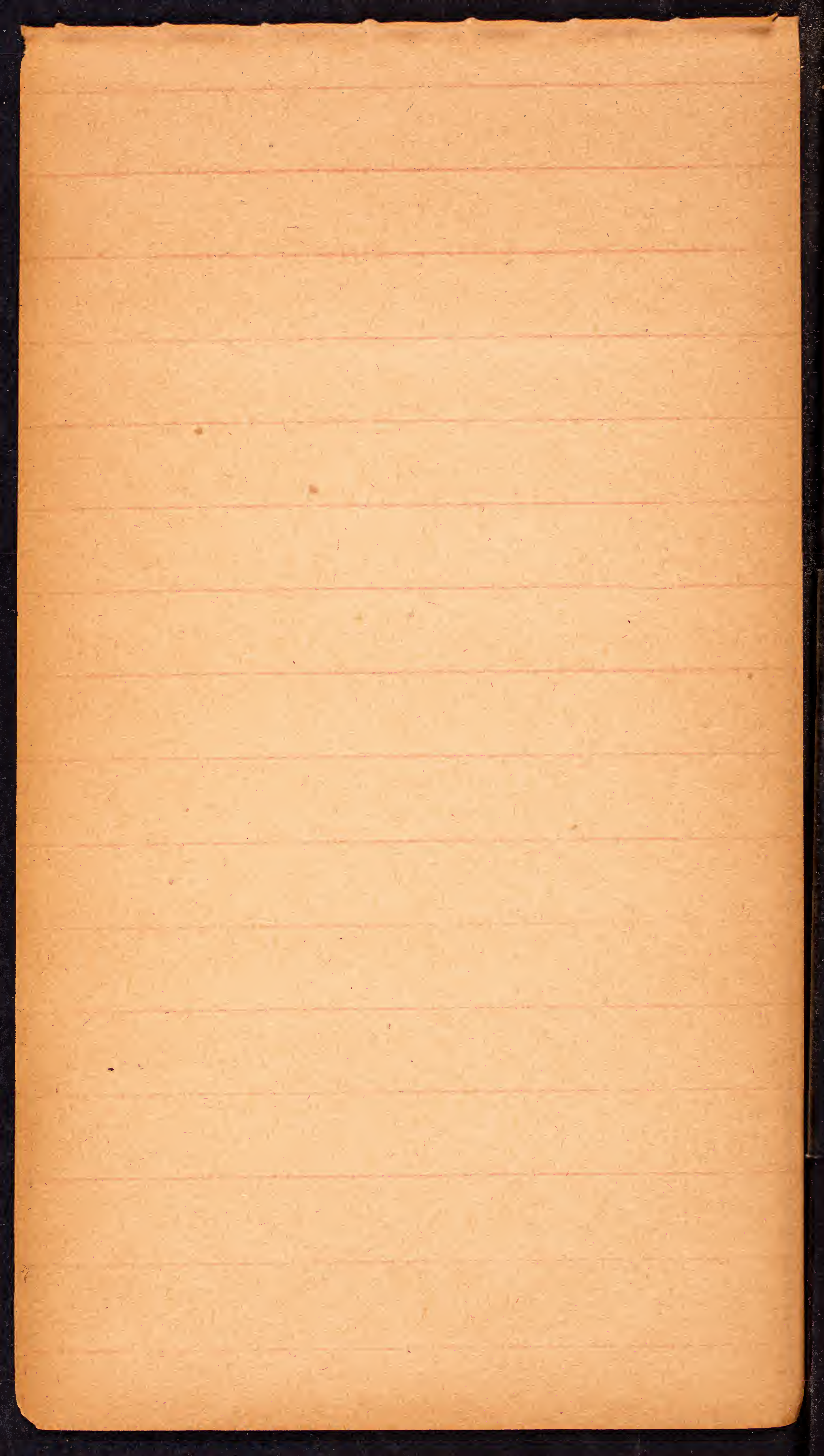














(The bluffs here ought to be  
accurately mapped.)



timber. Work this!

Country growing rougher

We descend into a more  
(little timber)  
open valley, & follow this  
down. We enter the  
great Miron valley, about

— miles below Meoga,  
& then follow close to Cluffs  
until we come to broad valley  
(with timber) in outlet.

Here some Cluffs show some  
Pexine remnants, & some

showing the Cluffs then  
make a little, close to

the R.R., but are far off.

Meoga is not on flat.



We ascend a <sup>tributary</sup> valley on a  
long up-grade.

Few cuts, & these small.

An occasional better one as  
we approach top.

We are pretty well on top  
before we reach Dunsfries.

In fact, we begin to run  
down here.

A <sup>long</sup> cut just out of Dunsfries.

We are dropping down.

Some thick grow timber  
both sides of RR. This is  
very extensive, - biggest on trip.

Much Am. elm (most)

Several good cuts in this



cuts. Right of Nimrod  
quite a bit of timber

Here we enter Key creek  
valley, Nimrod is well  
down on flat, but at edge  
of valley, the country  
to NW. runs to be rougher.

Some timber on creek to left,  
only a <sup>narrow</sup> fringe to right.

The RR crosses N. along edge  
of bluffs on W. side, gradually  
ascending, & enters hills in  
a good cut. (One good cut  
before it enters.)

(the 2nd cut)  
Then, sharp only, then  
loam (a few ft.) & then red  
drift.



Partly on flat. Some  
timber where we enter bluffs  
along narrow valley. Timber  
to left. A tributary creek here.  
Some low cuts as we rise.

Uplands here a little more  
rolling. We follow a creek  
valley below tops of hills.  
Quite a large cut in loam  
cut 2 or 3 miles.

A fringe of trees along creek  
to left.

Several smaller cuts in loam.  
More timber along tributary  
to right, & creek to left,  
as we descend. More scrub



Silver City, but there is a  
good fringe along creek.  
Uplands mostly bur oaks  
Bottoms: Cottonwood; <sup>salicams.</sup> along  
box elder, willow, walnut,  
green ash.

We run quite a ways along  
W. side of valley, & practically  
from place where we cross  
Silver cr. there are no  
(or very few) trees on bluffs on  
E. side, & there is a good  
fringe along creek.

Silver City is on W. edge  
of valley, mostly on the  
gentle W. slope of valley.



To right another valley with  
heavy timber.

Slopes to right are timbered.  
Another tributary valley with  
grove of trees.

Another grove on low  
bluffs to right. Large.

This really is quite a  
forest, & extends far N.

The bluffs are rougher here.

This is near where we cross  
Silver cr. to go west to  
Silver City.

They are ditching this.

There are no trees on farther  
bluffs opposite (E. of valley)



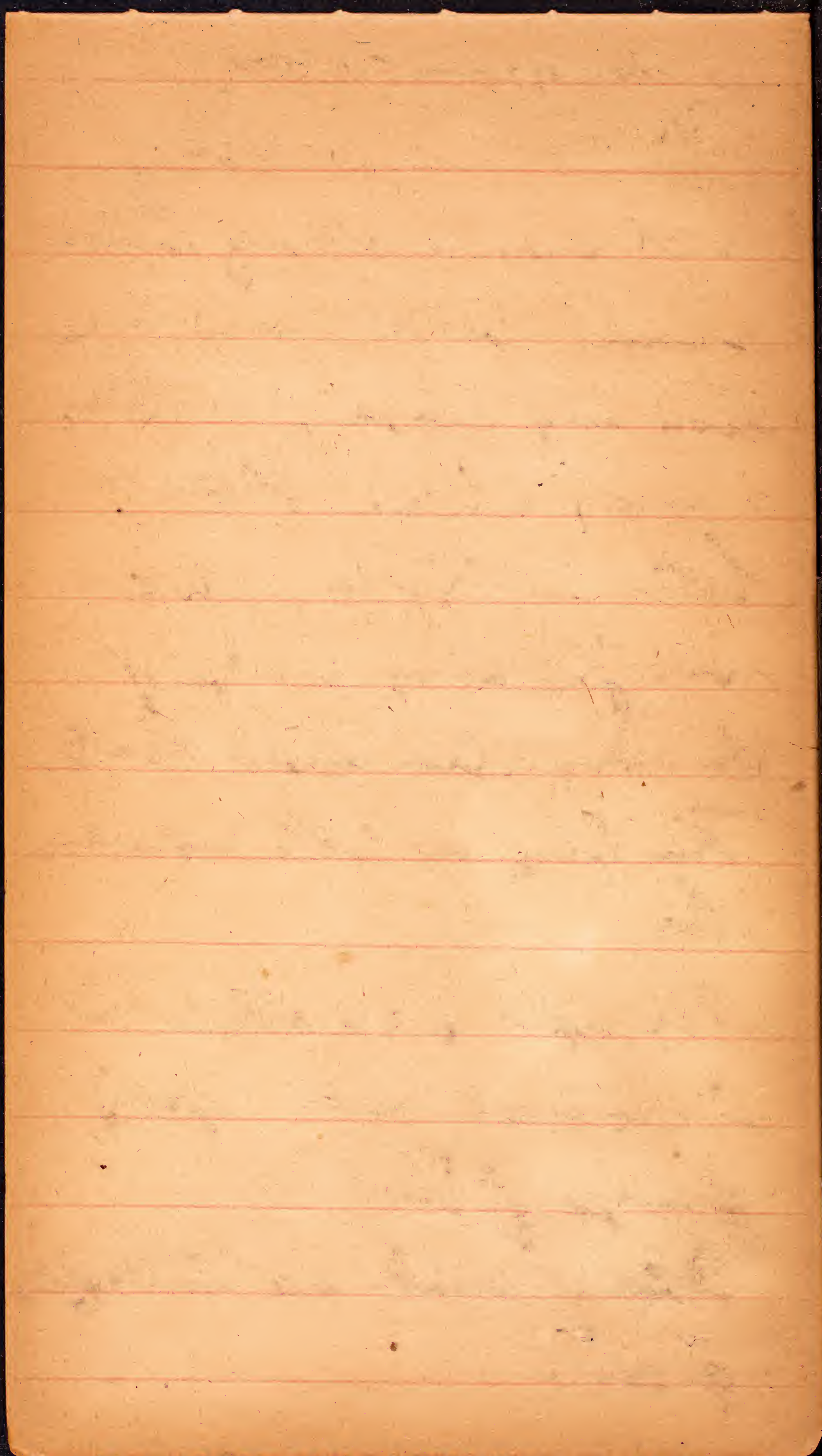
(Feb. 14, 1921) / (con)

Malvern is on edge of  
rather broad valley of Silver  
creek. Silver creek here  
has only fringe of low willows,  
& rarely a tree. Then  
bottomland timber. We  
run just along E. edge of  
the valley. (Cross under CB & D.)  
The bluff on both sides are  
low.

To right at a mile or two  
is a creek with good  
fringe of trees.

Along creek are interrupted  
groves.







Keosauqua - Dedication of  
State Park.

Previous visits -

Quit because of poor M. facilities  
clearing of your woods.

Great gratification -

Earlier efforts -

Now we have recognition -

Now, what will you do it?

You will use it for recreation.

But keep it natural.

Other uses -

Bird sanctuary.

Game -

Water and stream conservation,  
community meetings.

But in connection with recreation

Older people -

watch birds

plants esp. trees.

Knowledge of trees

Street-planting -  
Rocks, weeds, birds, etc.

A pleasure in this -

We must play, - or we

become ashen, our hospitals

& our countries will be

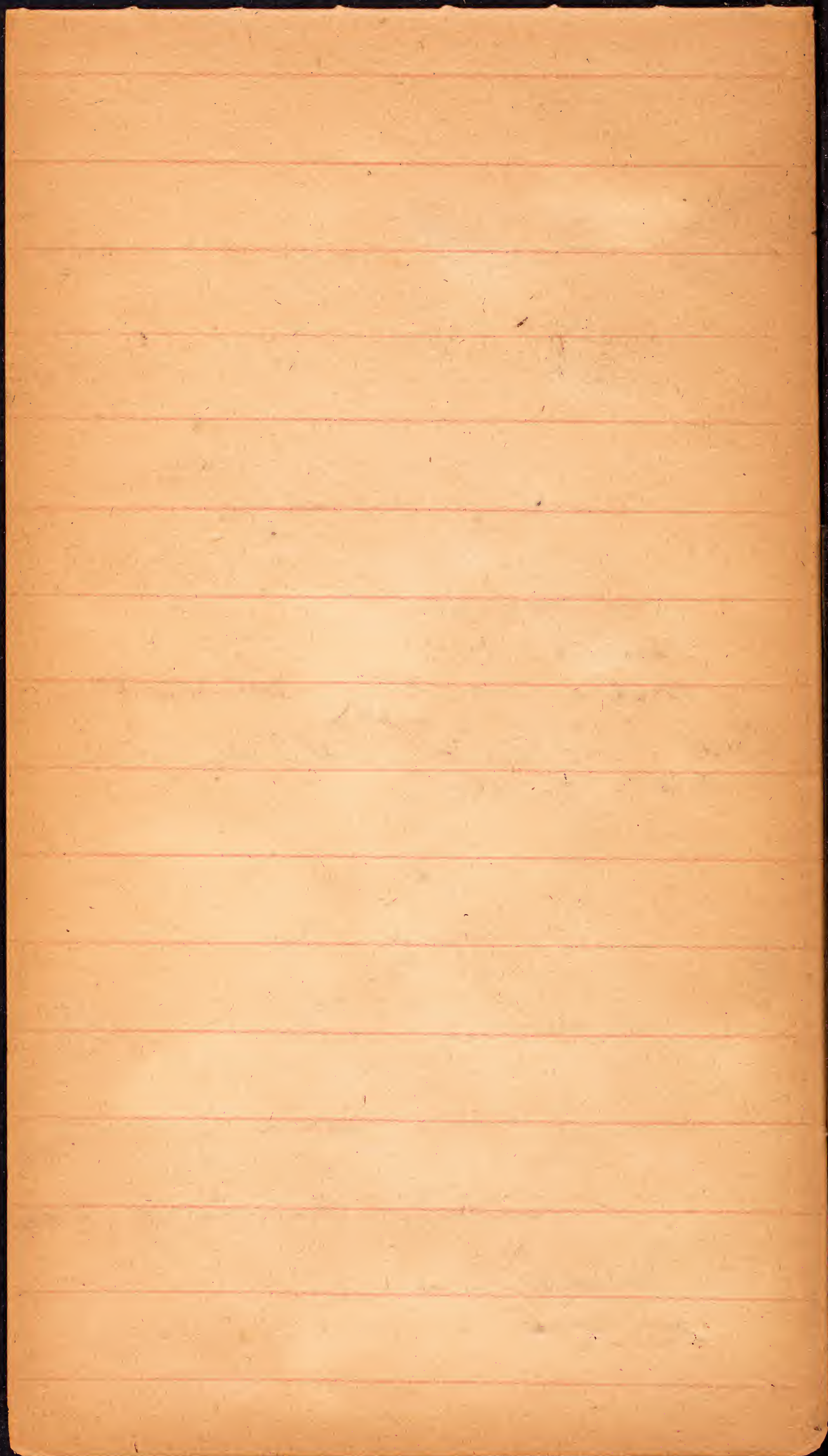
uselessly & permanently filled.

But children.

Recreation also -

But means of character building -







Mather remarked —

Parks — Jewels —

Joins — for people —

Parks for everybody people

Thinks only service is increasing  
recreational part.

That forest service duplicate  
work of parks.

Carhart —

There is now a great need.

190,000 + in Colorado alone

Along with other economic factors

the people should use it

Downer — illustrated talk,  
not to wait too long

Thursday Oct 11,

Came in to hear part of Crocker

Sec. of National Parks and Monuments

talked on their contemplated laws

Automobiles tax a year.

Followed by Purchans

Speaks for those who come with

family — carry equipment.

Advocates auto. camps

It increases business.



Danger - water power  
want Yellowstone Lake -  
checked on your land.

Payno

"No commercialization in  
any park."

(<sup>points out of</sup> ~~Salic~~ water power act)

Car but it was Park conversation"

Proyk - Lawyer - general talk  
chiefly about Maryland &  
Baltimore.

Emphasized - connecting parks with  
historical events.

Druid Hill Park - forest  
without cost! -

for children

play grounds

Public Athletic League.

Emphasized -

swimming pool

tennis courts

Ball fields

Historic places.

at length -

extremely  
interesting & instructive

Carhart again called on  
(Carhart) to talk on  
National Forests.

chiefly for recreation - says  
all furnish some place,

156 000 000 (A.D. ~~1910~~)

Recommendation of new  
National Forests  
" Forest " Forest



Meeting at Des Moines

Jan 10 - am.

Opened at about 10.

Program carried out

Mr. Harding - very good address

L. V. Pennell - read his address

explaining policy of board,

A. T. Mather - address - argued more  
for state than National park.

Carhart - Colorado - Made

plea for recreational

value of wild forests,

Appointment of Committee on Policy.

Cowles

McFarland

Burr

Seattle

Pennell

adjourned

Met after 2 pm

Jensen - plea for preservation

of native prairie & swamps

Simonds - agreed & special plan

for preservation of land along our streams.

Burhans paper postponed until later

Worth - argued for less in parks,

both houses

McFarland spoke of dangers

to National parks (seat,

Museum) - human greed  
steps in.



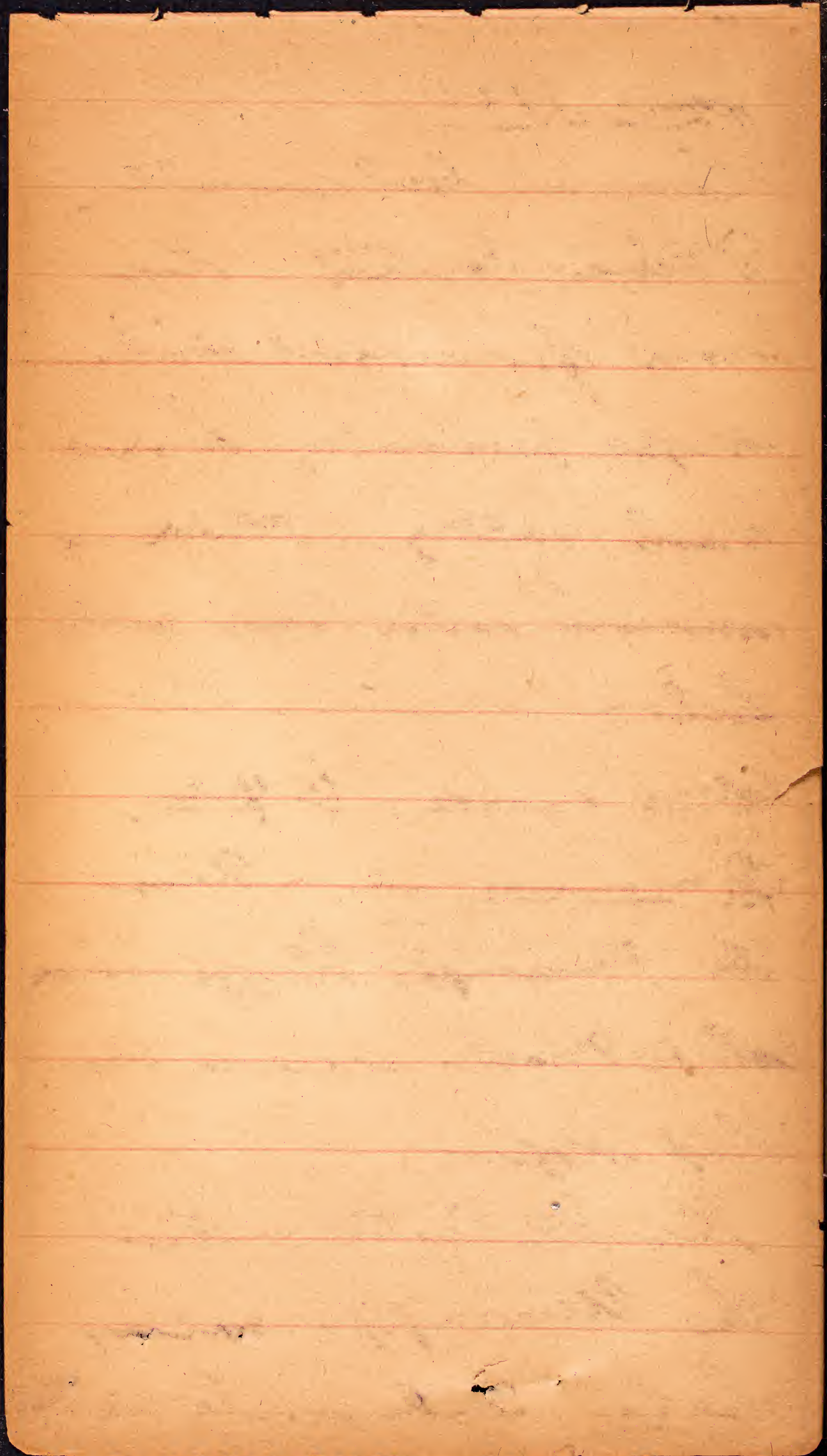
Have a variety of purposes

no distinction in field.

What will you do with it?

MacFarland emphasized strength  
of public sentiment.







Jan. 21, 1921

Came into Dubuque on the  
Illinois Central. The  
road for several miles  
drops gradually down a  
creek valley. There are  
numerous rocky ledges with  
lichens & mosses. I noticed  
Ulmus americanus, U. fulvus,  
Q. macrocarpa, etc. Near  
the Mississippi bluffs numerous  
White Birches appear on the  
steep slopes.

The Ill. Central enters  
the Mississippi valley  
below Dubuque (a mile or two)



and then runs up the river.  
At this place the bluffs  
and slopes look very  
promising.

I spent the afternoon at  
Dr. Young's home. Mrs. Young  
is of Danish blood, & they  
came from Northwood. Know  
the dwellers.

Had a fine meeting at  
the Masonic Temple. (Took  
dinner at Young's with Masters  
of the three lodges & the  
High Priest of the Commandery.)

About 400 were present, the  
hall was full, a good



many were in hallway, &  
some drifted away while  
others came.

I left at 11:<sup>58</sup> PM. for  
McGregor.

Jan. 22, 1921 Saturday.

Reached McGregor at  
2 AM. - put up at the  
Zimmerman Hotel.

Slept until 10, wrote until  
1:<sup>30</sup>, then went out with  
Capt. Willie S. Michael to  
the Picture Rocks with.

Worked mosses, lichens &  
liverworts, some on the

sandstone (chiefly at first bluff



mouth, & The St. P. St. in  
The Picture Rock canon.)  
and some on blocks of the  
(Gulch?) mag. limestone which  
have tumbled to base of  
slope.

Worked up the canon to  
the Picture Rocks. Found  
fungi & molds, especially on  
casswood logs. Also collected  
molds on ground & cliffs.

Found fresh-looking ferns:

*Camptosorus rhizophyllus*

*Pellaea atropurpurea*

*Polypodium vulgare*

*Aspidium marginale*

Also found a heath on  
sandy slope just below



Pike's Peak Tow camp  
with downy twigs. Found  
*Hemionys clavata*

The river is mostly  
covered with ice but it  
looks rotten. The weather  
has been mild, there  
is no snow & very little  
ice in most shallow rivers.

Capt. Pickel has 40 tons  
of hay on the island and  
he has not been able  
to move it off, - ice too  
thin.

Returned & had dinner  
with the Pickels (Capt's brother)



(the little black-eyed woman)  
Capt. Pickel & Miss Clark were  
present.

In the evening talked to  
the local Lodge. Quite a  
number of Marquette  
members were present.

About 42 all told.

The evening was beautiful &  
clear.

Jan 23, 1921 (Sunday)

A beautiful, clear warm  
quiet spring-like day!

was to leave at 8<sup>01</sup> AM,  
but a bright week



delayed our train and  
we left after 10<sup>30</sup>.

The region near (E. of)  
Hampton is somewhat  
rolling (not rough) and  
there was considerable rather  
scrubby squatly timber.

Seems to be P. elliptica  
& along swamps, where it  
is Pop. tremuloides.

The timber runs over the  
low knolls, but probably  
started in the deeper  
creek valley.

This should be looked up  
With the Meads, went



to baggage room & then spent  
afternoon at hotel, writing.

In evening went to Lodge.

Met Mrs. West of Denver.

Gave my talk and

left at 10<sup>00</sup> P.M.

for Porterville.

~~Continuation~~

(Skip the prime days for

in spots like & night

in party on floor & stairs

making Museum, Museum



The east bluffs of Hudson  
are low, gently rising.

The river itself has a  
distinct fringe or belt of  
trees.

The surface beyond the  
Hudson valley is even less  
rolling & we ride on a  
flat plain, with low, gentle  
hills to N. & NW.

We run into these low  
hills, & a few low cuts  
show. One rather large,  
but overgrown.

We drop down & pass  
thru a grove, just before



we reach Strahan. The  
small village is above R.R. &  
right. We still run in  
sag. We are in the same  
rolling country.

A fair cut just beyond Strahan.  
About a mile out there is  
quite a grove, & now I can  
see more. We run through two  
of latter.

To N. There are good sized  
groves - pass to left  
We are now following creek  
- valley down. To Mishin  
bottoms. At White Cloud  
we are at edge of valley.



cut — just beyond Solomon.

We are now well up on  
rather gently rolling plain.

Another low cut — similar

Two very low cuts, then  
a little larger, all low, &  
far apart.

We descend a creek valley,  
creek on left, with fringe of  
trees. Several very  
low cuts.

We cross creek, — flows N. —  
Run in say.

Some small cuts, & then  
one large one just after  
crossing road just before



A small creek valley runs  
N. W. from Iroquois, and  
another sag is parallel to RR  
on left side, then RR. crosses,  
leaving it on right side.

All this gently, but distinctly  
rolling. The hills rise  
conceivably, but not abruptly,  
on either side. The valley  
then turns north & we cut  
into hills (gentle). A fairly  
good cut just before reaching  
Admon, a little station  
well up. This cut is probably  
12-15 ft. deep.

Another similar looks



Good rock cut just beyond  
summit.

We run now in a rolling  
Kansan territory. Practically no  
cuts, & grades not steep.

A creek shows fringe of trees  
quite a lot on N.W. side of RR.

This valley runs parallel to RR  
for some distance.

Low cut as we ascend from  
this valley. Another, deeper cut.

Clumps of willows in low places.  
(*Salix amygdaloides*?)

Small cut at Janesville.

The RR runs in a zig-zag &  
the town is higher up the right.



The Wabash R.R. crosses the  
wide flat valley of the  
Missouri (here <sup>with</sup> muddy banks &  
bottom).

The bluffs on the W. side are low,  
sloping, and tree-less, excepting  
for a few planted groves.  
Beyond, in a couple of tributary  
valleys, are clumps & thickets  
of bur oaks, & a few willows <sup>low down</sup>.  
The R.R. ascends on a rather moderate  
grade to Summit. Here we are  
well up on the rolling uplands.  
The rugged topography, - all  
sweeping slopes. The station is  
not on highest part.



while hotel guests sat around  
with nothing to do. Very little  
attention is paid to guests, I would  
say that this is a good place  
to keep away from!

(We really left at 9:27 AM.)

Shenandoah is partly on the  
flat (the business part) & the  
residence part spreads over  
the hill. Rather nice.

They have some diagonal  
streets, & one that is curved.

There is a big tree nursery near  
the Y. Am. Elm, Birch, Canadian Pines  
etc.

Catalpa, soft maple, etc.



Deputy Sheriff by a couple of toughs from Coon,  
who had held up a crap game. The Sheriff  
manually were after them & at Bingham the  
~~about~~ former was shot.

Feb. 14, 1921 - Monday.

Left Shenandoah via the  
Wabash at 9:16 AM.

The day is beautiful,  
sunshiny and quiet.

(This City/Hotel is a great place!)

Although I had asked for the bus

for the 9:16 Wabash, & a young

traveling man had done the

same, the old gentleman of the

Hotel waved them on, & then said

the bus didn't stop. The bus

driver came up, and was waved on.

In the morning 2 or 3 elderly loafers

came in and carefully passed the  
morning paper from one to another



is very thin for the most  
part, & some part are practically  
treeless.

Most of the way the river  
is rather close to the western  
bluffs, which rise, for the  
most part, in rounded contours,  
not very abrupt, though slopes  
are much steeper than on E. side.  
Little timber on W. side.

Landed at Shennandoah &  
drove to Doty Hotel.

The day was beautiful, but  
my foot & jaw hurt so that  
I had to stay in. Had a

good meeting in the afternoon  
much excitement and number of



cultivation.

The trees are the usual alluvial

lot:	Cottonwood	Soft Maple
	Am. elm	Green ash
	Black Walnut	Salix amygd.
	Box Elder	Salix longifolia

The river winds back & forth  
across the valley, and the  
narrow belt of trees follows it.

The bluffs along W. side  
are more abrupt, & rougher,  
and there is some timber  
in the valleys or ravines.

These bluffs are, however,  
not really rugged.

The strip of timber along  
R.R. between Coburg & Essex



Feb. 13, 1921 - Sun.

Morning very foggy, but  
some sun shown. A fine day.  
Left Red Oak at 8<sup>30</sup> am.  
for Humboldt. The  
RR goes down the broad  
valley of the Missouri & all  
along there is a fringe  
of timber. Cannot yet see  
W. bluffs, but on E. side  
slope gentle & no trees  
except where occasional steeper  
banks. The valley is  
very broad, with very gradual  
slope to E, & all this under



There are few planted groves  
in this part.

An occasional Cornock thicket  
in deep ravines, & also  
along creek on W side of  
RR. More timber near  
Red Oak.

Spent afternoon in Red Oak.  
Fine residence district up on  
hill, with great view across the  
Richmond area.



Small thickets of trees in  
shattered valleys. Seems  
to get much rougher, &  
the RR climbs up grade.

Stanton is well up on  
high part of very rolling  
prairie. A small thicket  
along creek N. of RR.

Few *Liriodendrons* on banks  
just N. of RR. Planted?  
Valley W. & N. of R.R. shows  
small thickets. Some  
bur oaks on higher banks.

W. of Stanton a good  
cut - *Larix*??

The RR runs well up on uplands,  
all prairie.



The bluffs on both sides  
are low & with gentle slopes  
Most of the bottom land is  
fanned.

Low cut W. of W. Woodbury  
shows much red drift, &  
a yellowish layer above, not  
thick, & not loess?

<sup>(brown shales)</sup>  
Drift is visible on the  
long, gentle slope.

Other cuts show much  
drift & little "greenbotil"

This was all rolling  
prairie, little preserved even  
along RR.

The drift all along is very  
limey.



58 fringes of trees & a  
flat valley far north  
shows trees. Valley Jan  
S. also flat & with timber.

This must be Middle

Wednesday just before we

came into Villisca.

Villisca is on gently

rolling, <sup>very</sup> high ground.

The days here fine & bright.

Another flat valley

comes in from N. just

W. of Villisca. This

is the W. Wadaway.

There are fringes & thickets

of trees both N. & S. of RR.



hills with timber

~~The stream comes from the N. W.~~  
The stream comes R.R. W.

W. of Nodaway. The valley  
is here broad with ragged  
bluffs & groves.

The timber N.W. is in rain  
running bank almost west

We cross ~~the~~ <sup>East</sup> Nodaway

W. of Nodaway. Trees

now few, & in fringe along

river. Valley shows

timber far south.

Big cut W. of river shows

only drift.

As we approach Villisca

stream on N. show



run mostly in valley.

W. of <sup>the</sup> Woods Valley is head  
of the stream has fringe of  
trees & the slopes, especially

on N. side, also some timber.

There is another looking

of stream N. of RR

seems to be a tributary

from N. with some timber.

Then rough hills on S.

sides, with timber, & valley

on N. well timbered.

Then timber only along  
stream, & well N. of RR.

NW. of Norway, across

valley, are more abrupt.



Just at & beyond Corning  
the river crosses N. of RR  
& after a mile or so, it  
crosses back S.

Beyond this point for some  
distance but little timber

The river again crosses N,  
but it has been straightened

The ditch is S. of RR.

Where it again crosses S.

it curves away from RR a  
little & there is more timber

This is near Brooks.

Near Brooks very little  
timber, The country is

rolling all along, but we



The stream crosses & its  
fringe of trees is a <sup>thick</sup> <sup>black</sup> <sup>walnut</sup>  
Cottonwood - bur oak - American  
Red oak (?) soft maple

*Salix amygd* - *Corylus mollis*

There is a distinct belt of  
timber all along stream  
& some run upon hills  
with rising

Towards Corning the belt  
grows narrower.

Just before we reach  
Corning the "river" again  
crosses A. of R.R. Corning  
is, <sup>partly</sup> on upland - rather rough



sides of RR. Much cleared  
(stump) on slopes on S.  
side RR. Along "river" on N.  
side just a band of trees

Per oak? Just before  
reaching Prescott the  
trees on N. side practically  
disappear, & many more  
shown on S. side.

The "river" crosses RR. E. of  
Prescott, & then runs parallel  
on S. side.

Wood cut just W. of Prescott.  
There is a belt of trees all  
along stream S. of RR.  
About 1 mile W. of Prescott



Noted:

*Andropogon scoparius*

*Holcus lanatus*

*Elymus canadensis*

*Asclepias syriaca*

*Cirsium discolor*

Crowmell - on open, <sup>quite</sup> (somewhat)

rolling prairie.

*Artemisia multiflora*

*Erigeron canadensis*

(cuts show no loess - drift.)

*Lupinus albus* (all preceding)

*Asclepias verticillata*

*Philadelphus laevis*

*Medicago alba*

(Possibly a little loess in cap)

*Artemisia ludoviciana*

Along the E. Roadway

W. side of RR. There

are thickets willow, Elm

hickory, Crataegus mostly

Soft maple, - farther

down more trees, on both



Feb. 12, 1921

Left Creston at 11<sup>40</sup> AM.

The day is clear, fine, but  
the wind is quite sharp.

W. of Red Oak it is all  
rolling prairie, with only an  
occasional willow, <sup>etc. elm, bur oak,</sup> along creek, —  
This is Platte river.

A grove ~~along~~ <sup>in</sup> Red Oak,

N. of RR. A small timber

N. of RR on steep bank, etc.

Some timber is visible S.W.

of RR. — probably along the  
Platte river.

A few planted groves at  
houses. Good prairie  
strips along RR



There seem to be quite a lot  
of scrubby stuff, - oaks, etc.  
This was evidently small  
stream. What is probably  
12 mi. creek has more  
timber. Much clearer,  
then comes rolling prairie  
again, & there is practically  
nothing <sup>or very little</sup> in the way of timber,  
As Creston.

It was murky all day  
and in evening a colder  
wind came from the N.



been cleared. Shows stumps.

Again some timber N.  
of RR, this is along  
3-Mile creek? (yes)

Afton is well up on  
plain. Quite rough around  
here, & there is a little  
timber in valleys.

Deep cuts both sides at  
Afton. The country west  
is quite rough & the valley  
of 12 Mile creek has more  
or less timber, but evidently  
much cleared. It probably  
never was as heavy as at  
Afton. The country is now  
so rough.



Afton Jc.

E. of Harper, E. of <sup>Grand</sup> River -

the Chaps are rougher, &

there is quite a lot of timber.

The vicinity of Afton Jc.  
has a lot of timber & is

in rough. More timber

S. of RR.

The rough land & lot of  
timber show well near

S. & No. of Afton Jc.

Timber on N. side RR

runs out a mile or less

out. More shows S, &

it extends further west

Quite a lot on S. side has



here & there. There are  
also some warbler shots.

This should be worked

The valley & timber gradually  
fade out to west & country  
is rolling prairie. Good  
cuts along here.

Very soon rougher country  
again appears, & there is  
more or less timber, - especially  
S. of RR, - but soon also  
much timber N. of RR.

The Grand River valley  
to S. has quite a bit of  
timber, of some rough, timbered  
bluffs, - especially near



territory, - a deep valley  
with tributaries, - & there  
is quite a lot of timber.  
This looks like a good place  
for work. There is a little hotel -  
"The City Hotel." This deep  
wooded ravine or valley runs  
along the track west. Old  
pits are here, on S. side.

N. of RR. there is also  
some timber, but little valley  
& timber fades out westward.

This latter is a branch.

Main wooded valley is  
on S. side along RR.

There are prairie openings  
on the ridges N. of RR. -



There are comparatively few  
planted groves on this plain,  
and these are mostly small.  
There are few efforts to plant  
shelter-belts. Mostly  
groves around houses.  
Practically every house has  
a small grove.

Murray is set out on this  
plain.

From Murray to Thayer a  
little rougher, + an occasional  
cut along RR. Few trees  
in ravines (not deep)

At Thayer, especially  
S. (to left) is rougher.



Left Orceuta at 10:45 am.  
for Creston.

We are running on great  
plain. To SW. & S. the  
valley of Chautauque runs down.  
It is not deep. But there  
is some timber here & there  
on somewhat rougher S. slopes.

To the north are ravines  
(not very deep) with some  
timber.

On the whole there is gently  
rolling, & appears as a great plain.  
There seems to be no timber  
anywhere excepting in the  
ravines & valleys.



This strip is worth following  
for prairie flora.

There is a *Lactuca* & *Solidago*  
here - (none before) but I  
could not make out species.

*Lactuca* is probably *L. ludoviciana*.

It is now so stormy that

I can see only a short  
distance, but we seem to  
be well up in rather rough  
country. We are well on  
upland all along, but view  
is very limited on account  
of snow-storm.



We now run below top in  
rough prairie country,  
soon in savin thickets  
& grass appear, here &  
there. We soon run into  
more or less timbered creek valley.  
There is quite a bit of  
timber here, - all along the  
creek valley, - some up on  
slopes, especially in ravines.  
Rather scrubby, but oaks  
on upper slopes at Jamison.  
Beyond Jamison we run  
in narrow valley without  
timber & broad grassy  
strips along R.R. here.



The uplands catch is harder.  
Practically all this stretch  
of R.R., running N. of E. from  
Tusso (after 1<sup>st</sup> about 2 mi.)  
is in the valley (near N. Pluff)  
of South river.

Towards New Virginia we  
enter rougher country (after  
crossing river) & there are  
hills of timber in deeper  
ravines.

(Rare) { *Achillea millefolium*  
*Andropogon furcatus*  
*Bromus angustifolius*  
*Milphium laciniatum*

+ all those in preceding list

New Virginia is on rather rough  
upland prairie. Mostly well  
up, - station a little lower.



There is little timber on  
slopes on N. side, but more  
about slopes on S. side  
show more - much of it,  
however, cleared, with stumps  
still visible. There is just  
a little timber on the  
alluvial flat along river.  
Good prairie belt along  
RR on the left (N.)  
side).

Much of the timber to  
right (S.) looks gone.  
A little blizzard is on.  
They are clearing parts  
of the bottomland, too, but



see the more or less timbered  
valley ~~the~~ slopes of South  
River. We are here  
running all the way on the  
upland, with a broad view.  
Truss is well up on this  
plain. At beyond Truss  
this is lost from view. We  
run on upland for a couple  
or three miles & then begin to  
drop down into a rough  
saw-tooth territory. We  
drop well down into a valley  
with some timber to right, -  
patchy & on rougher slopes.  
We are in valley of South River.



but none on top of plateau.  
As we approached St. Charles  
the greater valley to right (W)  
→ down to left shows thicket  
→ timber.

St. Charles is well up on  
highest part of this plain, &  
view in all directions is good.  
Just beyond St. Charles the R.R.  
turns S. again. The uplands  
on which we were here show  
no trees excepting a few planted  
groves, but here & there, owing  
to wet, swamps show a little  
timber.

To the S<sup>W</sup> (right) we can



*Solidago missa*

*Lespedeza calici*

*Elymus virginicus*

*Rhus glabra*

*Oenothera biennis*

*Helianthus annuus*

*Aster multiflorus*

*Erigeron canadensis*

*Ammannium diacanthum*

*Andropogon scoparius*

*Urtica dioica*

St. Mary's is well up on a plain.

Just W. (to right) is a rather

deep & narrow valley with some  
timber.

Soon we get on a broad plain,  
more or less broken by ravines &  
valleys. The road runs almost  
due west from St. Mary's to St.  
Charles. A little timber  
is visible in the ravines.



The bluffs are not very  
rugged in this part

On the low slopes S. of RR  
after crossing river most of  
the trees seem to be birch & aspen  
certainly so at the edges.

On W. side, some distance  
away, is more rugged  
timbered country.

Wick is also in a rolling  
upland country, with hills  
rising somewhat <sup>(quite)</sup> higher all  
around.

Along the RR. there is  
more or less distinct prairie.

In this upland part I found  
the following, - none are but distinctly



we dropped into the valley  
of Middle River gradually.  
The lower part of valley, as we  
approach Martinsdale is  
quite well timbered & we  
pass through quite a lot of  
bur oak, etc. (bur oak outside)  
as we approach station.

There are no bluffs on this  
side of the river. A large  
part of this timber opposite  
the station seems to be bur oak.  
Up the river, on S. side, I  
can see higher timbered bluff.  
On S. side, <sup>E. of RR</sup> also higher &  
timbered, but as a whole



Within about 2 mi. of Prole  
we come up again nearer  
top & all signs of native  
grass disappear.

Prole is well up, though hill  
rise a little higher on all  
sides. It is near top of a  
great undulating plain, more  
or less broken up.

From Prole to Martinsdale  
is only 3 mi.

Soon the broad valley of  
Middle River is seen & in  
the barrens, here not very  
deep, are thickets & grass.  
This is P. E.



This valley runs around to  
S.W. so that we cross it.  
Here the ravine of lower  
valley (parts of it) are wooded.

Quite well -  
On lower ground -

Honey Locust

Common

Soft maple

Red Elm

Salix amygd

green ash.

Willow

White oak

Red oak

*Q. velutina*

Crab

*Corylus mollis*

*Ostrya*

(low)  
Common shrub

Scrubby bush.

After crossing the creek, I

found good wood on both

sides of RR, but especially

on the E. side.

Much has been cleared here.  
The surface is quite rough.



out of the creek valley to  
The rolling uplands, & while  
this is now all under cultivation  
it is evident that there were  
no native trees. Here & there  
are a few orchards, small  
windbreaks, & groves along  
fence lines. The strips along  
RR are prairie,

After getting well up, far  
to the E. & S.E. a broad valley  
showed. This was just  
before getting into Marquette,  
11 mi. out from Des Moines  
This valley & its tributaries  
show steps & features of  
Tertiary in various places.



Des Moines to Oskema. Feb. 11, 1921

A very light covering of snow.

Temperature rather mild; dry clouds.

Left Des Moines at 8 AM.

The surface is typical rolling  
(<sup>or stronger</sup> ~~medium~~) Kansan. Where

R.R. follows creek valley there  
are lines of trees, box elder,  
green ash, willow (sandy), soft  
maple, etc. at or near the  
banks. — On the steeper slopes  
on S. side of valley here &  
there are thickets & groves.  
Evidently upland country  
was all prairie.

The R.R. gradually ascends



*Callorhiza macrura* Presl,  
Cent. Plur 154

p. 223

" *lanuginosa* - Presl - 154

" *capensis* Puffe et Ramm  
Ozn. Fil., Apr. Aug 32

" *villana* Presl - 154

" *hottentotta* " " "

*Cincinnatia aquilina* Ledeb.  
Diss. I 24

*Asplenium aquilinum* Bernhadi  
Schrad. Jour Bot 1799 I, 310.

*Eupleris aquilina* Neuman,  
Phytol. II, 278.

*Paesia aquilina* Moore,  
Gard. Chron., 1858, 828.



- nature. Pteris *Portia* fern. - *Thunberg*, *More*  
 2221 *Pteris* *argentina* *Link*, *Sp. Pl.*, 1533  
 " *boucais* *Salisbury*, *Prodr.*, 402  
 " *foemina* *Gray*, *Bot. Ann.*  
*Brit. Pl.*, II, 16  
 " *caudata* *Link*, *Enum.*, *Pl. alt.*, II, 464  
 (excl. syn.); according to *Link*  
 " *brevis* *Thunberg*, *Flora*, (*Rejans*  
*Bot. Zeit.*) XIX, 427  
 " *rudicaulis* *Gleditsch*, *Flora*,  
*J.*, 424  
 (according to *Ledebour*)  
 " *venusta* *Wallich*, *Cat.*, 113.  
 " *exceles* *Blume*, *Enum. Pl. Java*,  
 1213  
 " *forma* *Wallich*, *Cat.*, 100  
 " *terminalis* " " 101  
 " *Wrightii* " *Cat.*, 2178  
 " *lanuginosa* *Gray*, *MS.*, *Willd.*,  
*Sp. Pl.*, V, 403  
 " *densa* *Wallich*, *Cat.*, 99  
 " *decomposita* *Gaudichaud*  
*Frey*, *Voy.*, 393 (according to *Hornem*)  
 " *revoluta* *Blume*, *Enum. Fil.*, *Java*, 214  
 " *villosa* *Fée*, *Gen. Fil.*, 126/28  
 (excl. *reflexa* & *Cunning* 408)  
 " *capensis* *Thunberg*, *Prodr.*, 172  
*Allosorus* *agrilis* *Pursh*, *Cent.*  
*Pl.*, 153.  
 " *tamien* *Pursh*, *Bot. Ph.*  
 154, according to *Ledebour*,



*Rudbeckia subtomentosa* <sup>var. *minor*</sup>

*Hieracium canadense*

Lafayette

Postville

Ames

*Hieracium longipetiolum*

Ames

Decatur co.

*Hieracium scabrum*

Decatur co.

Boone

Johnson co.

*Senecio aureus* (round lvs.)

Decorah

*Senecio v. oblongus*

Decorah

*Senecio palustris*

Hamilton co.

Okoboji

Grinnell

Decatur co.



8.13/ *Ath. Filix f-v. acrocalon*  
Clapham, M.S.

*Ath. f-v. crispum* Moore,  
Brit. Ferns 1 ed. 94

<sup>syn.</sup> - *Athyrium Filix-foemina* v. *Smithii*  
of gardens

Notes - Herbarium *Reuss*  
Jan. 9, 1920

*Corylus rostrata*  
Portville - 2 spec. in fr.  
Pammel, Or., etc.

*Opuntia Rafinesquii*  
Council Bluffs, Ia. - Pammel

The only mounted *Frölichia*  
*floridana* is from  
Muscatine co.

*Antennaria* compare *meadii*  
and *neglecta* for our  
prairie forms

Also *Parlinii* & *plantaginifolia*

*Eclipta alba* from

Des Moines  
Johnson co  
Decatur co.

Kossanga  
Jasper co.  
Creston (2)



Herbarium notes - Jan. 9, 1921

*Polygodium vulgare*

Boone Ledges	Myron
Sandstone - Roper	Winnebago co
Lansing	Eldora
Steamboat Rock	Winnebago co

*Phlegopteris Robertiana*

Decorah  
Postville

*Phlegopteris dryopteris*

Postville

Myron

Steamboat Rock

*Phlegopteris polypodioides*

Lansing

*Phlegopteris hexagonoptera* Johnson, et al.

*Aspidium Goldieanum*

allamakee co

*Aspidium marginale*

Postville

Eldora

(The *Asplenium Thelypteris* from  
Fayette (Ind.) is *A. filix-femina*)

*Asplenium Thelypteris*

Lansing

Dubuque

Waukegan

*Asplenium angustifolium*

Waukegan Jr.

Lansing

*Ranunculus Purshii*

S. E. of Spirit Lake - partly



(synonym)

*Althymia convexum* Newman, Phytol  
1851, App. XVII.

Ath - Filix-f. - v. *convexum* Newman,  
Hist. Brit. Ferns, 2nd., 245;  
3rd. ed., 212.

Ath. - *irriguum* Gray, Bot. Ann.  
Brit. Pl. II, 10.

*Asplen* - Filix-f. - v. *chaeticum*  
Reckin, Florige. Brit. IV, 60.

Ath - F. f. var. *polydactylon* Moore,  
Ferns of Br. Brit. Nature Printed,  
under T. 30.

Ath - F. f. var. *multifidum*

<sup>p. 11</sup>  
syn: Moore, Hand. Brit. Ferns, Led. 94.

Ath - Filix-f. - v. *viripara* Steele  
Handb. Field Bot., 215.

Ath - F. f. - var. *furcatum* of gardens

Ath - F. f. - var. *cristatum* Wollaston  
MS.

Ath - F. f. - v. *multiceps* Moore,  
Proceed. Hort. Soc. Lond., I, 70.

Ath, F. f. - v. *corymbiferum* Moore,  
Handb. Brit Ferns, 3rd., 145, 155.

Ath. - F. f. - v. - *depauperatum* Wollaston  
MS.; Moore, Ferns of Br. Brit Nature  
Printed, t. 34 B.

syn: Ath. F. f. - v. *ramosum* Moore &  
Wollaston, Gard. Mag. Brit. III, 262.



Herbarium notes - Ames

Jan. 9, 1921

*Gentiana puberula*

Decatur co.

Ames

Decorah

Steamboat Rock

*Meryculis trifolia*

Forest City

Emmet Co.

Fertile

Postville

Jewell Co.

*Geranium triflorum*

Fayette

Chickasaw Co.

Lawler

*Salix rotundata*

1/2 mi. NW. of Ames

*Salix sericea* is really *pitulana*

*Gentiana proera* (like *slender*  
*crinita*)

Swamps

Emmet Co., etc.

*Solidago bicolor*

(Find) Fayette

Look up *Aster angustatus*

W. Iowa

Griffith

*Lepidium perfoliatum* - in Iowa

Ames, Emmet Co.

*Euphorbia esula* - W. Iowa



(syn)

*A. fissum* Newman, Phytol.,  
1851, App. x. 777.

*A. cyclosum* Ruprecht  
Dist. Crypt. Ross. 41

*Polypodium incisum* Hoffmann,  
Racem. and Hist. Musc. Bot.  
1790, Pl. 9, 10, fig. 13 b.

Ath. F. f. var. *plumosum* Moore  
MS.; Id. Phytologist,  
new series, III; (1859) 19,

Ath. F. f. var. *gracile* Moore,  
Handb. Bot. Ferns, 3. ed. 158.

P. 11  
Ath. F. f. var. *dissectum* Wollaston  
MS. Moore, Ferns of Gt. Brit.  
Nature-Printed, under t. 30.

Ath. F. f. var. *rhæticum* Moore,  
Ferns of Gt. Brit. Nature-Printed,  
t. 31 A.

~~syn~~ Poly — *rhæticum* Linn., Sp. Pl. 1552  
according to Linnæus Herbar.

*Aspidium rhæticum* Sprengel,  
Syst. Veg., IV, 107.

*Aspidium virgatum* Smith, according  
to spec. in his Herbarium (Eng.  
Bot., xxxi, t. 2199 number undecim).

Id., Eng. Fl., 2 ed., IV, 283.

*Althyrum rhæticum* Roth, Fl. Germ.  
III, 67.



Herbarium Notes. June 9, 1924

*Centauria solstitialis*  
localities in Iowa

*Cirsium arvense* var.  
found in Iowa

*Synthyris Bullii*  
Charles City  
Delaware co.

*Phlox bifida* - none

*Brasenia peltata* - none

About 42 cases (Herb.) @ \$75  
in one room  
- \$3150.

Poisoning

spraying

Pyrethrum - dusting

Arsenic -

Corrosive subl.

6000 water, 4000 ale

10 grs cor. sublim

C 31

Sulphur

Formalin



*Asplen. - Filix-foemina v. trifidum*  
Dunkin, Florigr. Brit. II 59

*Asplen. - intermedium Link. Enum.*  
Alex. II, 459.

*Aspidium Filix-foemina Swartz,*  
Schomb. Journ. Bot. 1800, II 41.

*Nephrodium Filix-foemina Strengel*  
Fil. Berol. Syn. 30.

*Lectaria Filix-foemina Cavanilles,*  
Presl, 1801, 251.

*Cyathea Filix-foemina Bartoloni*  
Amoen. 429 (according to Muller)

*Cyrtopteris Filix-foemina Cosson*  
and Germain, Fl. Par. 676.

*Ath. - f. - v. marimum Moore, Pop.*  
Hist. Brit. Ferns, 1ed., 91.

*Ath. - f. - v. latifolium Babington*  
Man. Brit. Bot. 3ed. 413 (8)

*syn. 1 Ath. - latifolium Babington*  
M.S. - not of Presl.

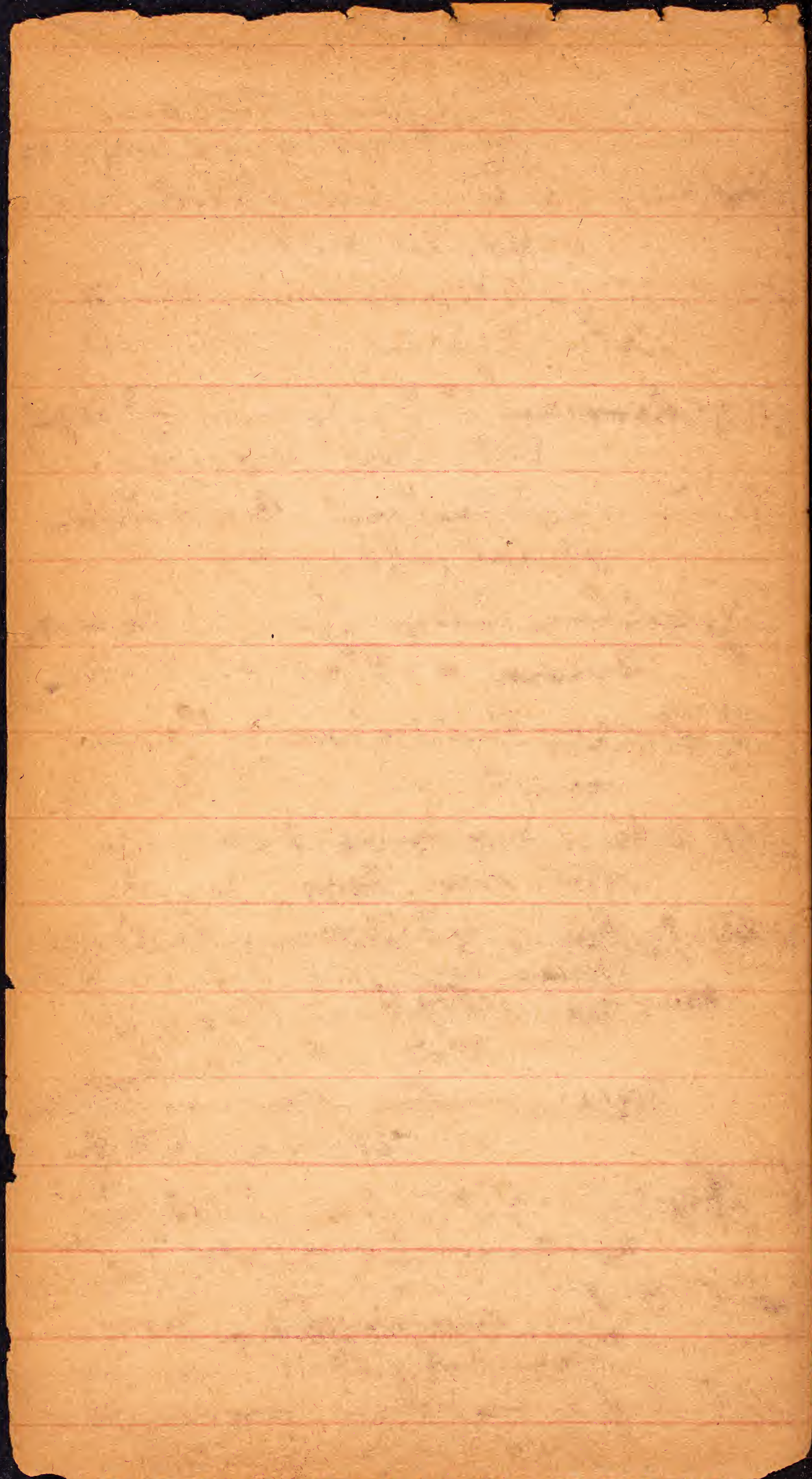
*Ath. - ovatum Newman, Phytol.*  
IV, 368 (red. syn. Roth, Newman)

*P. 12 (syn.) Asplenium Filix-foemina B latifolium*  
Hooker & Arnott, Brit. Fl. 6ed., 574.

*Ath. - f. - v. acuminatum Moore,*  
Handbook of Brit. Ferns, 3ed., 56.

*Ath. - f. - v. incisum Newman, Hist.*  
Brit. Ferns, 2ed., 243.







Ath. — acrostichoideum Bory:  
Mérat, Fl. Par. 4 ed. 373  
according to Mettenius.

Polypodium Filix-foemina Linnæus  
" " a. crenata Weis,  
Pl. Crypt. 313  
according to Roth  
(Weis)

Pol. — Filix-foemina (dentata) Weis, Plantae  
Cryptog. 315 — 1770  
Germ. Fl. Göttingensis

Pol. — dentatum Hoffmann, Decurculum  
Flora, II, 1.

Pol. — oblongo-dentatum Hoffmann,  
Racem. and Vex. Mag. Bot. 1790,  
pt. 9, 10, fig. 13 a.

Pol. — ovato-crenatum Hoffmann (same)  
pt. 9, 10.

Pol. — tripidum Hoffmann (same, pt. 9/10)

" bifidum " " "

" molle Schreber, Spicilleg.  
Fl. Lips. 70. —

P. 9. — lacticum Salisbury, Prod. 403

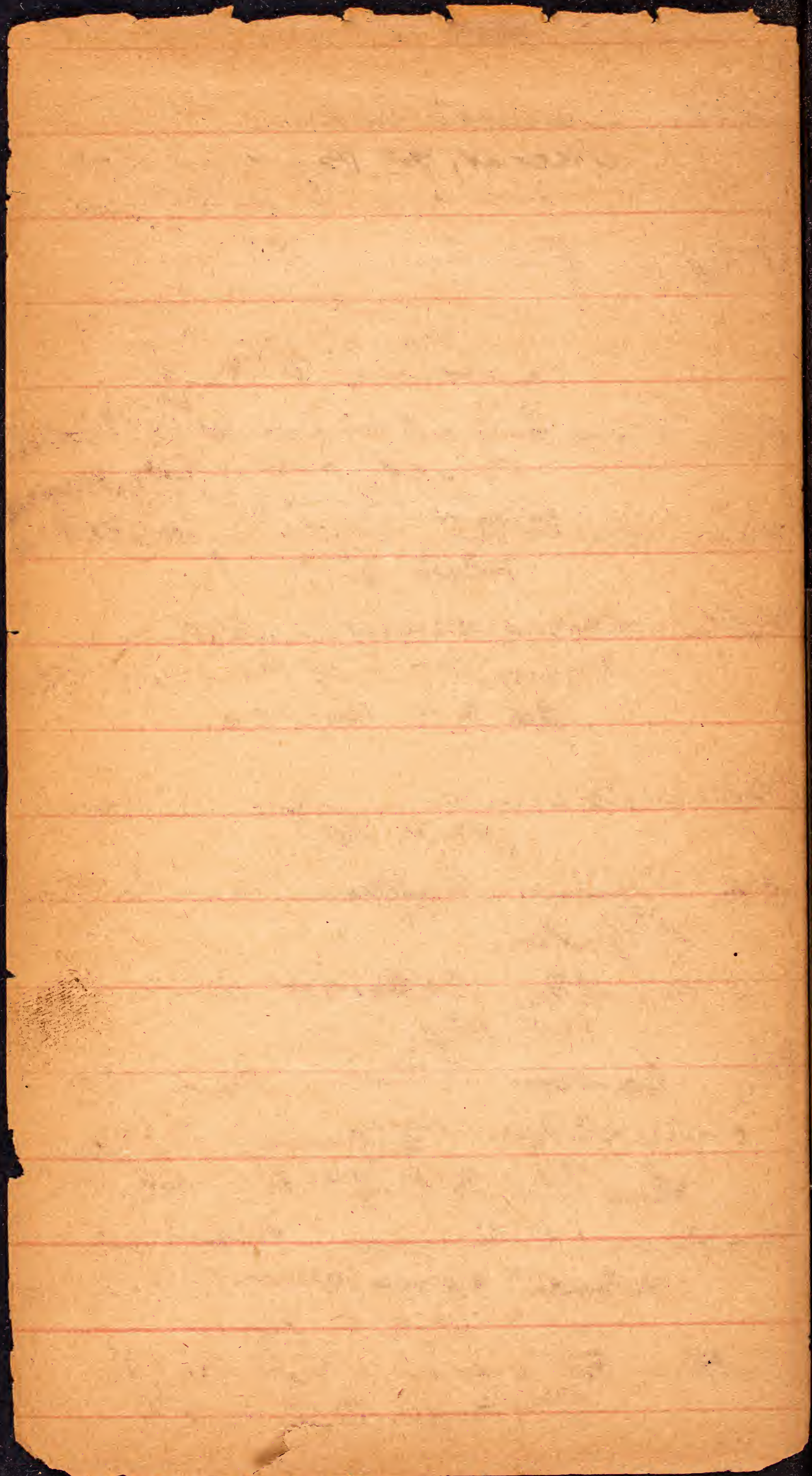
" revolutum Bory (according to Mettenius)

" Leseblui Mérat, Fl. Par., 2 ed., 276.

Asplen. — Filix-foemina Bernharti,  
Schrad. neues Journ. Bot. 1806, 2 p.  
26, 27, 48, t. 2, fig. 7.

Aspl. — Filix-foemina v. molle Deakin,  
Floriger. Brit. 14, 59.







*P. vulgare* v. *semilacorum* Link, *Filicium*  
*Species in horto regio botanico Berolinensi*  
*cultae*, 1841; p. 127  
(= *P. vulgare* var. *hibernicum* Moore  
Handbook of Brit. Ferns, 2nd ed., 44)

(= *P. vulgare* v. *sinuatum* Francis  
Brit. Ferns, 4th ed. 22 (not of Willd.)  
p. 57.)  
(= *P. vulgare* v. *canbriacum* Smith, Eng.  
Fl., 2nd ed. IV, 268 (in part)  
Mittlenius, Fil. Hort. Lips. 3/  
(excl. syn.).

*P. vulgare* v. *ovatilacorum* Moore,  
Handb. Brit. Ferns, 3rd ed., 55.

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*Athyrium filix-femina* Roth.  
Roth, Fl. Germ., III, 65

Ath. -- *Filix-femina* v. *molle* Newman,  
Hist. Brit. Ferns, 2nd ed., 242.

Ath. -- *ovatum* Roth, Fl. Germ., III, 64  
(Müll. Fl. Fridr. t. 2, f. 3)

Ath. -- *molle* Roth, Fl. Germ., III, 61.

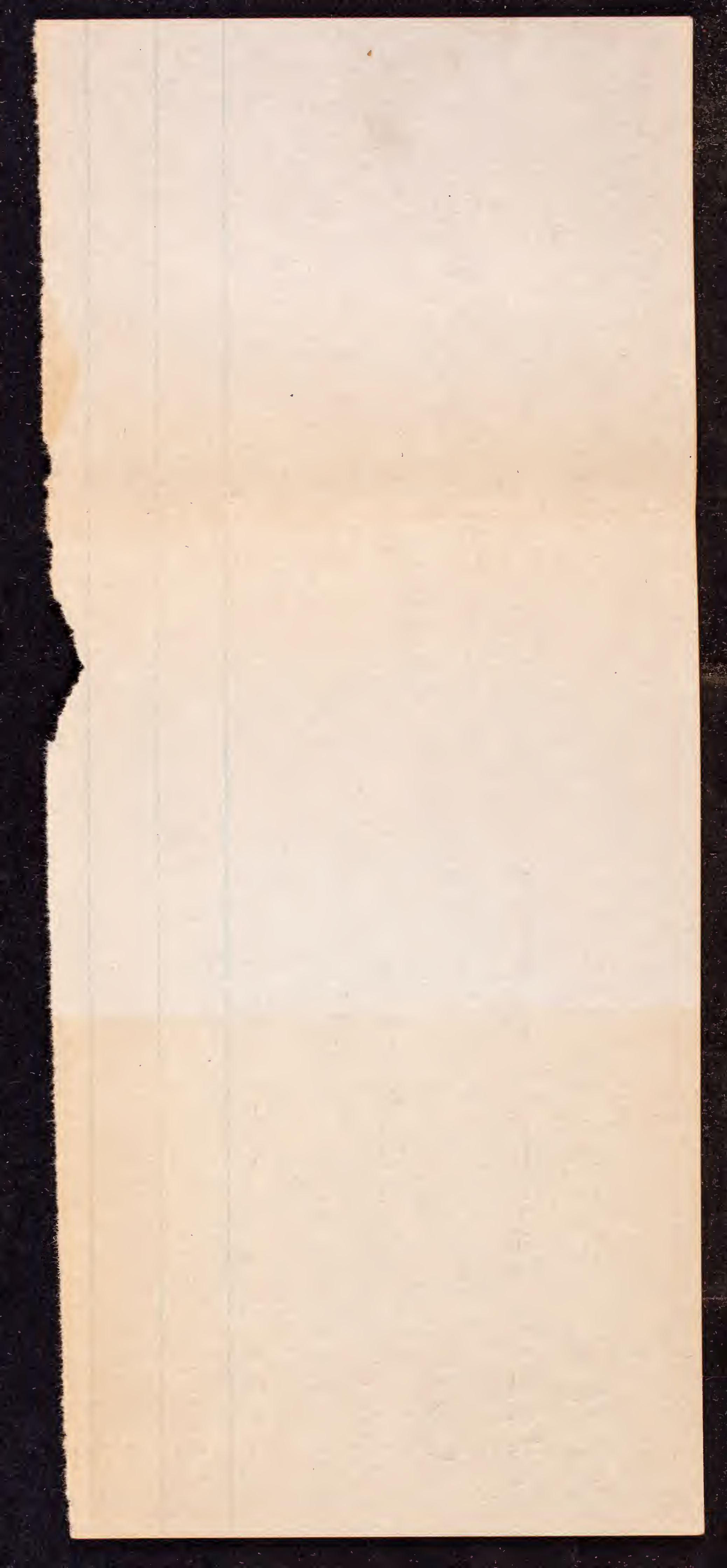
Ath. *trifidum* Roth, Fl. Germ., IV, 63.

Ath. *laxum* Schumacher, Enum.  
Plant. Sælland, II, 16.

Ath. *depauperatum* Schumacher,  
Enum. Plant. Sælland, II, 17.

Ath. *lactum* Gray, Nat. Arr. Brit.  
Plants II, 10







Polypodium vulgare (syn.)

- 1796 - P. boreal Salisbury  
1792 - P. pinnatifidum Gilibert  
1850-2 - P. arvense L.  
1841 - P. intermedium  
1840 - Cleptis vulgare Brown  
1859 - P. vulgare v. cristatum <sup>Thunberg</sup>  
1841 - P. " semilaeve L.







Nature-printed British Ferns,

vol. I, 1860, Thos. Moore

56. Polypodium vulgare L.

<sup>syn.</sup>  
(*Polypodium* viterbiense Boccone,  
Museo di Pianta, 60.-1697)

*Polypodium* ~~Coreale~~ Salisbury.

*Prodrum stirpium in Horto Chapel allerton* 1796

*Polypodium officinale* Guldensladt,

Reis. dur. Russ., I, 421; II, 25, 166.

*Polypodium pinnatifidum* Gilibert

<sup>Exercitia</sup> *Phytologia* II, 577. - 1792

*Polypodium canariense* Willdenow

HC. 19647. (= var.) 1806.

*Polypodium* australe Fée, Gen. Fil.  
236, t. 20, A. fig. 2. (= var.) 1850-2

<sup>Hooker W. J. and G. A. Walker-Arnot</sup>

*Polypodium intermedium* Hook. & Grev.

Bot. Beech. Voy. 495 (= var.) 1841

The Botany of Captain Beechey's Voyage - 1841.

*Ctenopteris vulgaris* Newman,

<sup>1845-47</sup>  
*Phytol.*, II, 274; *Id.*, *Phytol.*

1857, app. XXIX; *Id.*, <sup>A</sup> *Histor*

<sup>Edward Newman</sup> *of British Ferns*, 3 ed., 41.-1840  
and allied plants.

*vulgare* v. *cristatum* Moore

*Sim's Cat. Ferns*, 7859



Marshall A. Howe - of Albany

Board of Control of  
Bot. Abstracts  
Symposium program on gen. (Gunderson)  
System of class  
Committee to cooperate &  
get - Dr. Stanley Coulter

Dr. - Greenman  
Case Dr. Willshaupt ] -  
Min. Adah Roper Harris

415 - 7th Des Moines

note { Gen. by letter  
went to Chicago  
with



